SPIRITUALITY AND COPING AMONG RELATIVES OF PATIENTS WITH SCHIZOPHRENIA - A PILOT STUDY

Dissertation submitted to

The Tamil Nadu Dr M.G.R. Medical University

In part fulfillment of the requirement for

M.D. Psychiatry Final Examination, March 2015

CERTIFICATE

This is to certify that the dissertation titled “Spirituality and coping among relatives of patients with schizophrenia - a pilot study” is the bonafide work of Dr Abigail Gojer towards MD Psychiatry Degree Examination of Tamil Nadu, Dr M.G.R Medical University to be conducted in March 2015. This work has not been submitted to any university in part or full.

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CERTIFICATE

This is to certify that the dissertation titled “Spirituality and coping among relatives of patients with schizophrenia - a pilot study” is the bonafide work of Dr Abigail Gojer towards MD Psychiatry Degree Examination of Tamil Nadu, Dr M.G.R Medical University to be conducted in March 2015 and that this study has been done under my guidance. This work has not been submitted to any university in part or full.

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DECLARATION

I hereby declare that this dissertation titled **"**Spirituality and coping among relatives of patients with schizophrenia - a pilot study**"** is a bonafide work done by me under the guidance of Dr. Anju Kuruvilla, Professor of Psychiatry, Christian Medical College, Vellore. This work has not been submitted to any university in part or full.

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Sub: **Fluid Research grant project**:
Spirituality and coping among relatives of patients with schizophrenia- a pilot study.
Dr. Abigail Gojer, PG Registrar, Department of Psychiatry, Dr. Anju Kuruvilla, Psychiatry.

Ref: IRB Min. No. 8544 [OBSERVE] dated 12.11.2013

Dear Dr. Abigail Gojer,

I enclose the following documents:-

1. Institutional Review Board approval 2. Agreement

Could you please sign the agreement and send it to Dr. Nihal Thomas, Addl. Vice Principal (Research), so that the grant money can be released.

With best wishes,

Dr. Nihal Thomas
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Dear Dr. Abigail Gojer,

The Institutional Review Board (Blue, Research and Ethics Committee) of the Christian Medical College, Vellore, reviewed and discussed your project entitled "Spirituality and coping among relatives of patients with schizophrenia- a pilot study. " on November 12th 2013.

The Committees reviewed the following documents:

1) IRB application format
2) Curriculum Vitae' of Dr. Abigail Gojer, Dr. Anju Kuruvilla.
3) Consent form (English & Tamil)
4) Sociodemographic and Clinical Data Sheet (English & Tamil)
5) Positive and negative syndrome scale (English & Tamil)
6) Modified Jaloweic Coping Scale (English & Tamil)
7) General Health Questionnaire-12 (English & Tamil)
8) The Royal Free Interview For Spiritual And Religious Beliefs (English & Tamil)
9) No of documents 1-8

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The following Institutional Review Board (Blue, Research & Ethics Committee) members were present at the meeting held on November 12th 2013 in the CREST/SACN Conference Room, Christian Medical College, Bagayam, Vellore 632002.

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Dr. Anup Ramachandran	Ph. D	The Wellcome Trust Research Laboratory Gastrointestinal Sciences, CMCH.	Internal, Basic Medical Scientist
Dr. Mathew Joseph	MBBS, MCH	Professor, Neurosurgery, CMCH.	Internal, Clinician
Dr. Rajesh Kannangai	MD, Ph D.	Professor & In-charge Retrovirus Laboratory (NRL under NACO), Department of Clinical Virology, CMCH.	Internal, Clinician
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Mr. C. Sampath	B. Sc, BL	Legal Expert, Vellore	External, Legal Expert

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We approve the project to be conducted as presented.

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The Institutional Ethics Committee expects to be informed about the progress of the project, any **adverse events** occurring in the course of the project, any **amendments in the protocol and the patient information / informed consent**. On completion of the study you are expected to submit a copy of the **final report**. Respective forms can be downloaded from the following link: http://172.16.11.136/Research/IRB_Polices.html in the CMC Intranet and in the CMC website link address: http://www.cmch-vellore.edu/static/research/Index.html.

Fluid Grant Allocation:

A sum of 4,000 INR (Rupees Four Thousand only) will be granted for 1 year.

Yours sincerely

Dr. Nihal Thomas
Secretary (Ethics Committee)
Institutional Review Board

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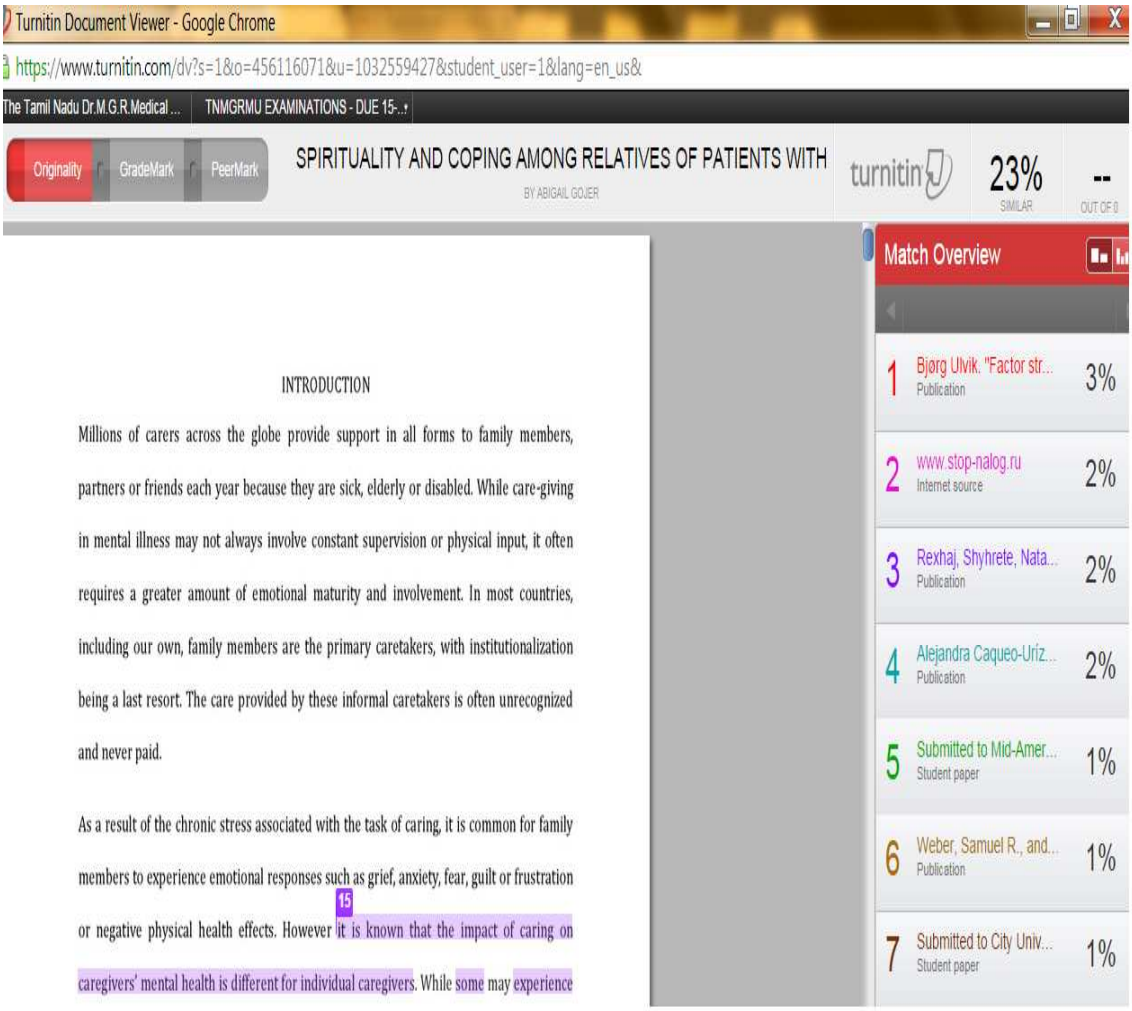
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INTRODUCTION
Millions of carers across the globe provide support in all forms to family members, partners or friends each year because they are sick, elderly or disabled. While care-giving in mental illness may not always involve constant supervision or physical input, it often requires a greater amount of emotional maturity and involvement. In most countries, including our own, family members are the primary caretakers, with institutionalization being a last resort. The care provided by these informal caretakers is often unrecognized and never paid.
As a result of the chronic stress associated with the task of caring, it is common for family members to experience emotional responses such as grief, anxiety, fear, guilt or frustration or negative physical health effects. However it is known that the impact of caring on caregivers' mental health is different for individual caregivers. While some may experience
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I especially thank all the MRD staff and doctors who helped me immensely with the recruitment of the patients and caregivers.

I also thank Mr. Suresh, Mr. Palani and Mr. James for their invaluable help in the preparation of the forms and the final manuscript.

I would like to express my genuine gratitude to my mother for her unconditional love and encouragement.

I thank God for His grace, strength and continued presence in my life and endeavours. I am extremely blessed to have been a part of this study.

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ABSTRACT

TITLE OF THE THESIS:

SPIRITUALITY AND COPING AMONG RELATIVES OF PATIENTS WITH SCHIZOPHRENIA - A PILOT STUDY

DEPARTMENT : Psychiatry

NAME OF CANDIDATE : Abigail Ruth Gojer

DEGREE AND SUBJECT : MD, Psychiatry

NAME OF GUIDE : Anju Kuruvilla

OBJECTIVES:

This study aims to assess coping strategies and spirituality in carers of patients with schizophrenia, measure associations between these factors, demographic characteristics of carer and patients' clinical characteristics.

METHODS:

Consecutive patients with schizophrenia and their primary caregivers attending the outpatient clinic were recruited. Positive and Negative Symptom Scale was used to rate symptom severity. Carer spirituality was assessed with the Royal Free Interview for Religious and Spiritual Beliefs and coping with the Modified Jalowiec Coping Scale. Socio-demographic details of carers and clinical details of patients were recorded. Descriptive stats were employed to describe continuous variables, frequency distributions were obtained for categorical variables, student t-test was used to compare continuous variables between groups, Pearson's correlation coefficient was employed to assess associations between two continuous variables.

RESULTS:

A variety of coping strategies are used by caregivers of patients with schizophrenia. The most frequently used method was the optimistic type while the least commonly used were the palliative and supportative methods. The method considered most useful was the optimistic while the emotive methods were considered least useful. Factors significantly associated with coping methods included caregiver's gender, years of education, employment, financial debt, and psychopathology as well as patient's symptoms and psychopathology. Most carer reported strong religious beliefs which influenced their life and coping.

INTRODUCTION

Millions of carers across the globe provide support in all forms to family members, partners or friends each year because they are sick, elderly or disabled. While care-giving in mental illness may not always involve constant supervision or physical input, it often requires a greater amount of emotional maturity and involvement. In most countries, including our own, family members are the primary caretakers, with institutionalization being a last resort. The care provided by these informal caretakers is often unrecognized and never paid.

As a result of the chronic stress associated with the task of caring, it is common for family members to experience emotional responses such as grief, anxiety, fear, guilt or frustration or negative physical health effects. However it is known that the consequences of taking care of mentally ill relatives vary from caregiver to caregiver. While some are not affected to a great extent, others may undergo a profound negative impact. Researchers have found that compared to noncaregivers, primary caretakers of patients with mental illness reported less life satisfaction, less positive but more negative affect, and increased levels of psychiatric morbidity especially depression. The positive aspects of caring have also been studied. Individuals have reported positive experiences such as satisfaction in being the care provider, increasing the overall potential of the relative with illness, improving interpersonal relationships, being responsible, engaging in mutual love and support, and personal development while maintaining personal dignity. Such factors may positively influence caregivers' overall mental health.

There are many factors that shape or influence the impact of care giving on carers' mental health which include the personal interaction between the caregiver and the patient, the extent of disability, financial situation of caregivers, social support available to the carers and the carers' coping strategies. Coping strategies are described as the different cognitive and behavioral efforts used to handle specific demands that are perceived by the individual as exceeding their available resources. While certain coping strategies such as coercion, avoidance and resignation are reported to be more distressing to carers and patients, coping styles focused on problem-solving and social support help in decreasing caregiver loads as well as improving the patient's coping. Thus it is evident that coping strategies can influence outcomes.

Religion and spirituality can be seen as a source of support which can enhance coping and provide individuals with meaning in the face of distress and difficulty. Studies on spirituality in schizophrenia have thus far have focused on patients. Most studies have reported a positive correlation between spirituality, better coping and better outcome in patients with schizophrenia. Religion is thus relevant in the management of people with schizophrenia in that it may help to decrease pathology, promote coping and enable recovery. Similarly, religion may also be relevant to coping strategies among carers of patients with schizophrenia. These factors may be important when evaluating the most appropriate supports for caregivers, either individual in groups. Research in this area is, however limited. This study was therefore planned to assess the role of religiosity and coping in carers of patients with schizophrenia.

1.1 SCHIZOPHRENIA

1.1.1 DEFINITION

Schizophrenia is a heterogeneous condition with alteration of cognition, emotion, perception and behaviour, the clinical syndrome of which is variable but extensively disruptive. Symptoms involve multiple psychological processes including ideation, thought processes, motivation, concentration and judgment. The manifestation of this illness is seen to vary across and within individuals over the course of time, but the effect is generally severe and long-lasting. These deficits are associated with impairments in multiple domains of functioning such as learning, self-care, occupational and interpersonal relationships. There have been symptom documentations from early civilization which would fulfill the criteria for the diagnosis of the current understanding of the illness. Schizophrenia however emerged as a medical condition worthy of research and management only in the 18^{th} century. It is noteworthy that the religious dimension of schizophrenia has seldom been taken into consideration.

Although the relevance of schizophrenia is uncontested today, the validity of the illness in terms of etio-pathogenesis still remains largely unknown.

1.1.2 EPIDEMIOLOGY

Widely acknowledged as a universal public health problem, with marked implications on both personal costs as well as public economics, schizophrenia affects just less than 1% of the general population. The prevalence would further increase to around 5% if the schizophrenia spectrum disorders ie. schizoid/schizoptypal personality disorders, schizoaffective and delusional disorders were included in the estimates. It is of note that family pedigree studies have established the increased prevalence of these disorders in biological relatives of probands diagnosed as schizophrenia.

Schizophrenia is seen across all cultures and geographical divides, with incidence and lifetime prevalence rates being the same. There is a slightly higher incidence in men as compared to women (1.4:1), urbanity and migration as compared to rural regions(1), with the outcome being more favourable in developing as compared to developed countries(2). These patients are at a higher risk for substance use, especially nicotine dependence. They are also more predisposed to aggression and suicide. Studies have shown that suicide is a significant cause of death in schizophrenia, with approximately 10% of patients having completed suicide.

1.1.3 ETIOLOGY

Although the etiological processes which determine the pathophysiology of schizophrenia have not yet been comprehensively identified, robust evidence pointing towards genetic factors has been established from twin, adoption and family studies. There is a 50% concordance rate of expression of schizophrenia in monozygotic twins. However, this data clearly demonstrates the fact that individuals who are genetically predisposed to schizophrenia do not necessarily go on to develop the same; therefore the role of environmental factors as a causative factor in the development of schizophrenia comes into prominence. If this vulnerability-liability model of schizophrenia is correct in its assumption of environmental factors being relevant, it leads to follow that other factors, either psychosocial or biological, may prevent or cause schizophrenia in an individual.

1.1.3.1 Biological:

Linkage and association studies have shown promising results at the following sites - 1q21-22, 6p22-24, 6p21-22, 8p21-22, 10p11-15, 13q14-32, 15q13-15, and 22q11-13. Chromosomal site analysis has also shown evidence of certain candidate genes, with the current focus being on alpha-7 nicotinic receptor, DISC 1, GRM 3, dysbindin, COMT, NRG 1, RGS 4, and G 72. The presence of other unknown genes and the exact role played the proteins produced still remain largely undetermined.

Certain measures of phenotypic manifestations of the schizophrenic genes such as the following have also been identified – Dysfunction of oculomotor physiology (eg. smooth

pursuit eye movements), information processing (eg. the continuous performance task and forced span-of-apprehension test), and sensory gating (eg. P50).

1.1.3.2 Environmental:

Potential environmental risk factors which would favour a neurodevelopmental pathological process would include maternal starvation/substance use, exposure to influenza epidemics, complications during the perinatal period, Rhesus factor incompatibility and winter deliveries. Further support for a neurodevelopmental versus a neurodegenerative pathological process comes from consistent neuropsychological, cognitive psychological and neuroimaging findings in new onset cases which are comparable to well established, chronic ones.

1.1.3.3 Neuroimmunovirological:

This is one of the oldest theories of schizophrenia which has the weakest supportive evidence. Postulations include north to south prevalence gradient, edemicity and excess winter births with no single version being definitively validated. The general pathogenic models include retroviral infection, current or active viral infection, past viral infection, virally activated immunopathology, autoimmune pathology, and secondary influences (i.e., in utero exposure to maternal infection).

1.1.3.4 Birth and pregnancy complications:

Multiple studies have repeatedly demonstrated the association between obstetrical complications and an increased risk of schizophrenia. The following major categories have been identified thus far - pregnancy complications (ie. bleeding, diabetes, preeclampsia, and Rh incompatibility), abnormal fetal growth and development (ie. low

birth weight, congenital malformations, and reduced head circumference), and delivery complications (ie. asphyxia, emergency cesarean section, and uterine atony).

1.1.3.5 Neuroanatomical:

Examination of the postmortem brain tissue has been the primary source of information regarding the neuroanatomical theories associated with schizophrenia in the preceding century. With the advent of non-invasive techniques, a detailed study of the structure and function of the living brain has become possible. A further advantage is that these studies have come to the fore at a time when there is a better clinical understanding of various neuronal structures and their implications on behaviour. Research so far, has consistently shown the following findings in patients with schizophrenia – increased sulcal widening which correlates to loss of brain tissue, especially in the prefrontal and temporal regions, decreased volume of the limbic structures, and increased volume of the basal ganglia neurons. Functional imaging studies have documented abnormalities of circulation and glucose metabolism in the dorsolateral prefrontal and inferior parietal cortices.

The current view is that schizophrenia is a disorder of neuronal circuits caused by a structural or functional lesion. It has been hypothesized that an early developmental lesion of the dopaminergic tracts to the prefrontal region leads to dysfunction of the prefrontal and limbic systems which is thus responsible for the positive and negative symptoms as well as the cognitive impairment seen in patients with schizophrenia. It has also been hypothesized following integration of animal and human studies that dysfunction f the anterior cingulated basal ganglia thalamocortical circuit causes positive psychotic symptoms whereas dysfunction of the dorsolateral prefrontal cortex underlies the production of negative or deficit symptoms. A third propounded theory is the

involvement of the language circuits and the associated cortical and subcortical structures in the development of hallucinations, delusions and formal thought disorder. The development of these hypotheses offers a major advantage in deciphering the neuroanatomical aspect of schizophrenia, by understanding the various brain structures and linking it to the interpretation of information derived from imaging and functional brain studies.

1.1.3.6 Biochemical:

Of all the biochemical hypotheses of schizophrenia, dopamine is the most enduring one. This is based on observation of drugs on the dopaminergic system - drugs that increase dopaminergic activity induce psychosis that is similar to schizophrenia, while those that block the post-synaptic dopamine receptors cause a reduction in the same. The rationale for the role of dopamine excess, is particularly compelling. However, establishing the same by means of laboratory markers has proven problematic. Imaging, especially PET studies have provided more tangible evidence favouring dopamine involvement. Postmortem studies too have confirmed the elevation of striatal D2 post-synaptic receptors. This remains a particularly robust explanation for the positive symptoms of schizophrenia, despite the lack of conclusive evidence. Interestingly, recent studies have also explored the findings of dopamine deficiency occurring in patients with predominantly negative symptoms. This, along with the observation that dopamine antagonistic agents produce behaviours suggestive of negative symptoms when administered to animals and people free of mental illness, leads to a reformulation of the dopamine hypothesis, which postulates concomitant dopamine excess and deficiency.

Glutamate which is the major excitatory neurotransmitter in the brain, has also been recently investigated with regards to the role it plays in the development of schizophrenia. This is due to an increased understanding of the role of NMDA receptors in the regulation of cognition and behaviour, the interaction between glutamatergic and the dopamine, choline, GABA systems, observations of abnormal NMDA binding in the prefrontal cortex of patients with schizophrenia, as well as observations regarding the acute and chronic effects of phencyclidine (PCP) and related compounds. Positive symptoms of schizophrenia have been mimicked by the acute administration of PCP, while a more chronic administration is said to produce a prefrontal hypodopaminergic state, which has been argued is responsible for the negative symptoms of the illness. Ketamine, which is the analogue of PCP, has shown a transient, mild production of schizophrenia-like symptoms in normal volunteers in experimental studies. It has also demonstrated a transitory worsening of positive symptoms when administered to patients with schizophrenia. Kainate and AMPA receptors have also shown some bearing on the pathophysiology although the evidence is currently not very robust.

Acetylcholine acts at the muscarinic and nicotinic cholinergic receptors which are widely distributed throughout the brain. Cholinergic mechanisms have an effect on higher mental functions which are seen to be impaired in patients with schizophrenia – namely, attention, working memory, speed of processing and sensory gated processes. Evidence to suggest that acetylcholine abnormalities are implicated in the pathophysiology of schizophrenia include – the high prevalence of smoking in schizophrenics as compared to other psychiatric disorders or the general population, decreased muscarinic and nicotinic

receptors in postmortem studies, and impaired performance on the P50 sensory gating paradigm.

Other neurotransmitters of interest in recent years include serotonin, norepinephrine, GABA and neuropeptides such as substance P and neurotensin. Studies on the same however, have so far remained inconclusive.

The glutamatergic and cholinergic hypotheses underline the major recent transition in our understanding of the biochemistry of schizophrenia. Earlier, observations of drug actions decided clinical treatment, and then, an advancement of the pathophysiological theory of schizophrenia. With recent strides in knowledge regarding the neuronal organization of the brain and further understanding of the neurotransmitter systems, it is now possible to derive a pathophysiological theory first, and then, attempt new clinical treatment from the same. This is of special significance in those aspects of schizophrenia which are not therapeutically responsive to dopamine antagonistic medications.

1.1.3.7 Integrative hypothesis:

The integration of the neuroanatomical and biochemical hypothesis points towards the development of the pathophysiological theory of schizophrenia. The elicitation of the neuroanatomy and biochemistry of cortical microcircuits has also served as a starting point for the same. These integrative models provide a basic structure for identifying potential neurotransmitter targets for drug development. They also are useful in providing explanatory models for the observed effects of pharmacological agents in patients with schizophrenia.

1.1.4 CLINICAL FEATURES

Schizophrenia is characterized by fundamental distortions of thinking and perception, along with affect which is either inappropriate or blunted. This disturbance involves the most basic functions that give a person a sense of individuality, uniqueness and self-direction.

The onset may be acute, with behaviour that is seriously disturbed, or insidious, with a gradual development of changed thinking, affect and conduct. The course of schizophrenia shows equally great variation and is by no means inevitably chronic or deteriorating, with the outcome being, in some cases, complete, or near complete recovery.

The 10th Revision of the International Classification of Diseases and Related Health Problems – Mental and Behavioural Disorders (ICD 10, 1992) diagnoses schizophrenia using the following guidelines:

(a) Thought echo, thought insertion or withdrawal, and thought broadcasting;

(b) Delusions of control, influence or passivity, clearly referred to body or limb movements or specific thoughts, actions, or sensations; delusional perception;

(c) Hallucinatory voices giving a running commentary on the patient's behaviour, or discussing the patient among themselves, or other types of hallucinatory voices coming from some part of the body;

(d) Persistent delusions of other kinds that are culturally inappropriate and completely impossible, such as religious or political identity, or superhuman powers and abilities;

(e) Persistent hallucinations in any modality, when accompanied either by fleeting or half-formed delusions without clear affective content, or by persistent over-valued ideas, or when occurring every day for weeks or months on end;

(f) Breaks or interpolations in the train of thought, resulting in incoherence or irrelevant speech, or neologisms;

(g) Catatonic behaviour, such as excitement, posturing, or waxy flexibility, negativism, mutism and stupor;

(h) "Negative" symptoms such as marked apathy, paucity of speech, blunting or incongruity of emotional responses, usually resulting in social withdrawal and lowering of social performance; with these not being due to depression or neuroleptic medication;

(i) A significant and consistent change in the overall quality of some aspects of personal behaviour, manifest as loss of interest, aimlessness, idleness, a self-absorbed attitude, and social withdrawal.

The requirement for a diagnosis of schizophrenia is that a minimum of one very clear symptom belonging to groups (a) to (d), or at least two of the groups from (e) to (h) should have been present for a minimum period of one month. Group (i) applies only to a diagnosis of simple schizophrenia, with a duration of at least one year being required.

The diagnosis of schizophrenia should not be made in the presence of excessive depressive or manic symptoms unless it is clear that the schizophrenic symptoms preceded the affective disturbance. It should not be diagnosed in the presence of overt brain disease or states of substance intoxication or withdrawal.

The categories of schizophrenia identified are – paranoid, hebephrenic, catatonic, undifferentiated, post-schizophrenic depression, residual, simple, other and unspecified schizophrenia.

The classification of the course is characterized by the following – continuous, episodic with progressive deficit, episodic with stable deficit, episodic remittent, incomplete remission, complete remission, other and course uncertain, period of observation too short.

The fifth edition of the Diagnostic and Statistical Manual of Mental Disorders (DSM V, 2013) follows the following diagnostic criteria:

A. Two or more of the following, each present for a significant portion of time during a one-month period, with at least one of these being from (1), (2) or (3)
    1. Delusions
    2. Hallucinations
    3. Disorganized speech
    4. Grossly disorganized or catatonic behaviour
    5. Negative symptoms
B. For a significant portion of the time since the onset of the disturbance, level of functioning in one or more major areas, such as work, interpersonal relations or self-care, is markedly below the level achieved prior to the onset.
C. Continuous signs of the disturbance persist for at least 6 months. This must include at least 1 month of symptoms that meet criterion A and may include prodromal or residual symptoms. During these prodromal or residual periods, the signs of the disturbance may be manifested by only negative symptoms or by two or more symptoms listed in criterion A in an attenuated form.
D. Schizoaffective disorder and depressive or bipolar disorder with psychotic features have been ruled out because either 1) no major depressive or manic episodes have occurred concurrently with the active-phase symptoms, or 2) if mood episodes have occurred during active-phase symptoms, they have been present for a minority of the total duration of the active and residual periods of the illness.

E. The disturbance is not attributable to the physiological effects of a substance or other medical condition.

F. If there is a history of autism spectrum disorder or a communication disorder of childhood onset, the additional diagnosis of schizophrenia is made only if prominent delusions or hallucinations, in addition to the other required symptoms of schizophrenia are also present for at least one month.

Course specifiers are as follows:

A. First episode, currently in acute episode, partial remission or full remission

Multiple episodes, currently in acute episode, partial remission or full remission

Continuous

Unspecified

B. With catatonia

C. Severity is rated by a quantitative assessment of the primary symptoms of psychosis, including delusions, hallucinations, disorganized speech, abnormal psychomotor behaviour, and negative symptoms. Each of these symptoms may be rated for its current severity on a 5-point scale ranging from 0 (not present) to 4 (present and severe).

1.1.5 MANAGEMENT

Historically, the care and treatment of patients with schizophrenia has been both humane and inhumane. It should be remembered that the value of humane care is paramount and treatment should not rest solely on scientific evaluation of efficacy.

1.1.5.1 Pharmacological

The modern era of effective pharmacological therapies was ushered in with the advent of Chlorpromazine in 1952. The antipsychotic agents used for the treatment of schizophrenia have a wide range of effects, but all share the capacity to antagonize post-synaptic dopamine receptors in the brain.

Conventional agents are termed as neuroleptics because of their propensity to induce neurological side effects. The newer or second generation antipsychotics, are less likely to cause these, and are referred to as atypical antipsychotic agents. The universally recognized clinical effects of these drugs are to reduce positive psychotic symptom expression and prevent relapse, with tranquilization and sedation being secondary benefits. The efficacy of these drugs further extends to include psychotic symptoms associated with illnesses other than schizophrenia. In contrast to successful remediation of these symptoms, conventional antipsychotics have not shown to be beneficial for the negative or deficit symptoms, or cognitive impairment which are associated with patients with schizophrenia.

The four primary purposes for the use of antipsychotic agents throughout the world are

1) To manage acute positive psychotic symptoms
2) To induce remission from symptom exacerbations

3) To maintain achieved effects over prolonged periods of time ie. maintenance therapy
4) To prevent relapses or new episodes of symptom expression ie. prophylactic therapy

The first atypical agent to be available for clinical use was Clozapine, which however had a 1% risk of developing the potentially life-threatening adverse reaction of agranulocytosis. Later newer antipsychotics which have been used with increasing frequency due to their lesser propensity for inducing extrapyramidal side-effects, include Risperidone, Olanzapine, Quetiapine, Amisulpiride, Aripiprazole and Ziprasidone. They are also superior to the conventional agents in terms of amelioration of depressive symptoms and prevention of relapse and rehospitalization, which have led to them largely replacing the first generation agents in clinical practice today. Limitations of the newer agents which need to be weighed before indiscriminate use include onset of metabolic and cardiovascular dysfunction.

There has been, so far, no empirical basis for augmentation strategies, either using a combination of antipsychotics, or addition of other agents such as mood stabilizers, antiepileptics, antidepressants or antianxiety agents. Clozapine is universally acknowledged as the agent of choice for treatment resistant schizophrenia.

Electroconvulsive therapy (ECT) was frequently used for the treatment of patients before the introduction of antipsychotic drugs. It is particularly efficacious to hasten recovery and for catatonic stupor or excitement, but results are similar to those obtained with medications, namely, reduction of positive symptoms rather than reversal of functional impairment. With modern ECT being safe and painless, its use is nonetheless hampered

by societal attitude, but also because any initial therapeutic advantage is not sustained. Currently, there is no evidence that ECT is useful in treatment resistant cases. Hence, drug treatment approaches are still generally preferable.

It is now recognized that optimal treatment for schizophrenia includes the integration of pharmacological along with psychosocial approaches as well as rehabilitation techniques.

1.1.5.2 Psychosocial

Controlled clinical trials have demonstrated that intensive psychotherapy is less effective than medications and should no longer be considered as an alternative to pharmacological interventions. It has also been conclusively shown that it is not superior to less expensive, less ambitious forms of psychosocial interventions. Supportive forms of psychosocial treatment have been shown to be compatible with medications, increase the effectiveness of overall treatment, promote patient adherence and maximize socio-occupational functioning. Studies have documented the sizable benefits in reduced relapse and hospitalization rates when adequate psychoeducation and family therapy are incorporated into pharmacological management. It is thus evident that psychosocial and rehabilitation strategies are essential components of the comprehensive treatment of patients with schizophrenia.

These include cognitive behavior therapy for treatment-resistant positive psychotic symptoms; supportive, problem-solving, educationally oriented psychotherapy; family therapy and education programs aimed at helping patients and their families understand the patient's illness, reduce stress, and enhance coping capabilities; social and living skills

training; supported employment programs; and the provision of supervised residential living arrangements.

The interest and encouragement of these services mirror the current shift from a hospital-based to a community-based system of care. The demonstrated benefits of utilizing these services bring about a challenge to establish adequate community-based treatment approaches. It is to be noted that in terms of therapeutic accomplishment, morbidity reduction and cost-benefit implications, the benefits are significant and rival those of other medical fields.

1.1.5.3 Caregiver burden in schizophrenia

As a result of chronic stress associated with the task of caring, it is common for family members to have a multitude of emotional responses such as grief, anxiety, fear, guilt or frustration. Nolan and colleagues defined caregiver stress as the result of a cognitive imbalance between the perceived nature of the demand and the perceived capabilities of the person. Tull established that the person caring for a patient with mental illness may experience stress in the form of financial strain, management of the patient, crisis situations and the loss of intimacy. It has been established that the caregiver burden in the families of the mentally ill is statistically higher than that of caregivers of other medical conditions by Ampalam et al in 2012 (3).

A study in Chandigarh reported that the family is the key resource in the care of patients with mental illness(4). The primary reasons being identified for the same were the Indian tradition of interdependence and concern, and the dearth of trained professionals needed to cater to the vast majority of the psychiatric population.

Few studies elaborate about the impact of caregiving on the mental health of the carers. A study by Shah et al showed the relatives of patients with schizophrenia develop feelings of guilt, loss, fear, helplessness, vulnerability, defeat, anxiety, resentment and anger(5). They identified significant distress due to the same, marked difficulties in maintaining leisure and social activities, a decrease in the total income and considerable strains on marital relationships.

Magliano et al. reported that increasing levels of burden are associated with reduced social interests, reduced social support network, along with resignation and an avoidance of contact with the family member suffering from schizophrenia. It is noteworthy that in the absence of any specific intervention, this feeling of fatalism can remain unchanged for as long as a year in caregivers (6).

In addition to the direct effects, distress experienced by carers of individuals with schizophrenia can, in turn, have a harmful impact on patient progress with increase in relapse and hospitalization rates.

Given the significant influence of care giver burden, over recent years efforts have been made to address this complex issue.

1.2 COPING STRATEGIES

1.2.1DEFINITION AND CONCEPT

Coping has been defined as one's cognitive and behavioral effort to manage the internal and external demands of a person–environment transaction that that are appraised as taxing and exceed the resources of the person. The concept of coping has been closely associated with stress, and is considered a process by which an individual attempts to restore equilibrium in response to a stressful life event. It is thought to be a continuously changing process that allows one to work through situations and events (57).

Coping can be described as having two primary functions. The first is centered on problem solving, and the second on the immediate regulation of the emotion elicited by the problem. The former mechanism seeks to focus on and alter the problem in question, while the latter are strategies centered on handling the emotional responses brought about by the problem. Problem-centered coping has been traditionally related with better physical as well as mental health as it leads to adaptation, a sense of wellbeing and better social functioning. When an individual does not cope positively, maladaptations can lead to negative self-concepts and poor functioning.

1.2.2 COPING MODELS

Much of the work on coping strategies was done by Lazarus who postulated that coping is determined by the way a person firstly appraises the situation -whether something important is or is not at risk in a particular situation ,and secondly, goes on to examine the available resources for coping. Two types of coping were identified. In problem-focused coping, the person attempts to eliminate the source of stress or alter its effects; in

emotion-focused coping, the person reinterprets the situation without altering the actual person–environment relationship.

Other models of coping include Antonovsky's salutogenic model which proposes that resources such as wealth, ego strength, cultural stability and social support enhance one's resistance and are central to a person's ability to cope with stress. The trans-theoretical model of change suggested by Prochaska and Velicer suggests that there are several stages that an individual passes through while getting ready to cope with a major problem. Several other models of coping have also been proposed (57).

1.2.3 COPING IN CARERS

Carers use a variety of methods to deal with the distress they experience and to reduce their anguish. Most investigations on this group have been based on observations using the models and frameworks derived from Lazarus and Folkman's theory of stress coping (7,6,8,9). It has been demonstrated that certain coping strategies such as coercion, avoidance and resignation are associated with suffering and patient relapse while coping styles focused on problem-solving and social support help in decreasing caregiver loads as well as improving the patient's coping (10–12).

1.2.4 COPING IN CARERS OF PATIENTS WITH SCHIZOPHRENIA

Around 30-91% of patients with schizophrenia live in a family setting (13–15). Deinstitutionalization, current trends towards reduced length of hospital stay in acute care settings and restrictions imposed on involuntary treatment imply that family-based caregivers are an important source of support and strength on the long term as well as during periods of psychological instability.

Coping strategies adopted by relatives are influenced by a series of personal and situational factors, such as dysfunction, burden, personal appraisals, available support and personality traits. Socio-cultural and ethnic factors play a role of great importance by determining events which are perceived to be stressful and the subsequent coping styles followed to deal with those events. Thus, the search for spiritual help or approach to religion may be a way to cope in some cultures along with the standard search for social and professional support styles of social coping (16).

The choice of a coping strategy used by caregivers is associated with the kind of representation of the illness that the caregiver has developed. In this way, the caregiver's model seems to have an influence on their choice of coping strategy. This choice can then, by itself, either lighten or increase caregiver burden (17). Effectively, negative representations of the illness can lead to the use of unsuitable coping strategies (18).

The negative consequences of schizophrenia for the patient is seen to be related to the objective burden of carers, while the negative consequences of the same to themselves are correlated to a subjective burden (19,20). The subjective burden experienced by caregivers has also been linked to their negative emotional responses to the diagnosis of schizophrenia (20). It has been documented that carers with elevated expressed emotions often consider the patient responsible for the causes of the illness (21,22). Furthermore, relatives with high, critical expressed emotions often underestimate their capability of coping with multiple problems, perceive schizophrenia as less likely to be managed by available treatment, and attribute higher negative consequences of the illness both to the

patient as well as to themselves (19). Distress revealed by caregivers are correlated with the following – chronic illness, treatment resistance, a feeling that the patient fails to exhibit greater responsibility towards the illness, perception that the illness brings about negative consequences for both the patient as well as for the carer, and eliciting of painful emotions associated with the illness (19,20,23).

A review of literature showed that there are a variety of coping strategies that have been identified to be used by relatives of patients with schizophrenia. One study reports three types: cognitive, behavioral and emotional coping. The commonest coping strategy was the cognitive one, predominantly focused on a search for information. In the behavioral style, relatives tend to use distraction techniques such as keeping themselves busy and pursuing personal interests. The most ineffective style was found to be that of emotional reaction, with greater despair being the end result (16).

Studies have reported that for caregivers in particular, strategies like coercion, avoidance and resignation are associated with suffering and patient relapse (10,11). Birchwood and Cochrane explored coping strategies used by caregivers of schizophrenia patients. Their results detail eight essential coping categories: coercion, avoidance, ignorance/acceptance, constructive, resignation, reassurance, disorganization and collusion. They also showed that coercion is the first predictor in patient relapses (27).

There are several studies that have attempted to study the specific details of different coping strategies: Magliano et al conducted a study which explored coping strategies in relation to physical and somatic symptoms of caregivers. They also studied the association between these two variables (6). The results indicated that emotion-focused

coping (coercion, avoidance and resignation) is positively correlated with participant anxiety and depression.

In another study, Knudson and Coyle utilized a procedure which impelled certain caregivers to modify their coping strategies. In their qualitative study, the caregivers of individuals with schizophrenia were invited to describe their coping strategy. It was seen, that at the onset of the illness, carers tended to use a problem-focused coping strategy. However, if the symptoms became persistent and chronic, they progressively opted for emotion focused strategies, which enabled them to attain a position of acceptance and, finally, of wellbeing (9).

A study on caregivers of patients with first episode psychosis in London showed that most carers used practical and emotional methods of coping rather than spiritual-based coping which was widely reported in the Mediterranean countries (10,24). Caregivers in this setting tended to use spiritual coping only to deal with the stigma associated with having a mentally ill relative.

Specific to the subjective burden, it appears that emotional and cognitive reactions are associated with the use of coping strategies that are specifically emotional, such as avoidance and isolation (17,25). These strategies are directly proportional to caregiver distress (26). This increased distress further strengthens the vicious cycle leading to elevated expressed emotions (8) leading to unraveling of the family atmosphere and significant addition to the burden (27).

Foldemo et al. showed that when a person develops schizophrenia, parents usually experience feelings of anger and anxiety, guilt, fear, frustration and sadness. This should not be neglected but utilized in the integral treatment of the patients as well as their families. Furthermore, the burden of taking care of a patient with schizophrenia is associated with decreased quality of life and has a significant impact on both the health and behavior of the family. As a consequence of this experience, relatives employ different coping mechanisms to decrease their anguish (28,29).

In a review of studies with families that live with individuals with a severe mental disorder, Saunders concluded that older people with a higher educational level were more effective in their coping; spouses of patients with a severe mental disorder used wishing for the situation to disappear and the development of a cure as the most frequent strategies for this disorder; and isolation was one of the most employed strategies employed by parents (30).

Rexhaj et al showed that illness representations were slightly correlated with coping styles. More specifically, emotional representations are correlated to an emotion-focused coping style centred on coercion, avoidance and resignation as compared to problem-focused or social support-focus styles of coping (31).

Caqueo-Urizar and colleagues studied the coping strategies of relatives of patients with schizophrenia in the Aymara ethnic group belonging to Northern Chile. The results concluded that both Aymara and non-Aymara relatives used comparative coping strategies with the exception of spirituality which was more likely to be used by the

Aymara. This was correlated with their personal world-view, with relationships with different deities being both an explanatory model as well as coping form with various phenomena. They conceptualized the universe as being of 3 worlds – the celestial where the Gods influence life, health and destiny; the earth with the pantheistic view that every existing being has a spirit; and the underworld which also has an influence on life and health. It was noted that while the Aymara utilized the mental health services, they continued to follow treatment prescribed by their ancestors which enabled them to better cope with schizophrenia (32).

Kate et al in their study conducted in Chandigarh showed that spiritual, religious and personal beliefs were an integral part of the concept of quality of life in relatives of patients with schizophrenia. Furthermore, the choice of coping strategies had an impact on their quality of life. Coping styles which had a negative correlation included coercion, social support and collusion (33).

1.3 RELIGION AND SPIRITUALITY

"Spirituality changes our mood: Religion changes our life"

Spirituality and religiosity are closely linked, used interchangeably by some while thought to be two different concepts by others-spirituality being more concerned with direct experience of latent higher consciousness within one's self, i.e., the internal space, whereas religion considered to be an institutionalized set of beliefs, practices, and guidelines that an individual adopts and follows.

1.3.1 RELIGION

A broad definition of religion would include both spirituality (knowledge of one's own identity, concerns with the transcendent, questions about the ultimate meaning of life) as well as religiousness (specific, rigid doctrines and denominations). Put simply, religion is institutionalized spirituality. Religion can be either unifying or divisive as has been documented in the annals of history over the course of time. Social thinkers have demarcated religiousness as being a member of a community of people who follow similar ways of worship, from spirituality, which is identifying oneself as being part of a greater spiritual force.

1.3.2 SPIRITUALITY

Spirituality is a global concept which has faith in an all-encompassing higher being. It includes a sense of meaning, purpose and connectedness. The universality of spirituality extends across all cultures and boundaries, while at the same time retaining its individuality and uniqueness. Spirituality is the common factor in all forms of organized

religion. The term 'spiritual' has been included since the DSM IV under the heading of other conditions that may be a focus of clinical attention.

The spirituality and psychiatry special interest group of the Royal College of Psychiatrists define spirituality as a "Distinctive, potentially creative and universal dimension of human experiences arising both within the inner subjective awareness of individuals and within communities, social groups and traditions".

1.3.3. RELIGION, SPIRITUALITY AND COPING

There has been a rise in scientific interest in understanding the relationship between religion, spirituality and mental health in recent years. This change is in direct contrast to psychiatry's long history of ignoring this aspect, or labeling it as pathological. It is now being recognized that an individual's coping is directly influenced by his or her religion and spirituality in addition to the personality make-up. They are useful in terms of providing coping, problem solving strategies, social support and a sense of meaning during periods of unexpected events (34). They provide comfort by their very nature of entailing optimism and hope – sacred writings have several role models who facilitate the acceptance of undeserved suffering; people are given an indirect control over their circumstances, thus diminishing the sense of personal responsibility; and a well-knit community of support is provided to dispel the sense of isolation and abandonment (35).

Religion and spirituality confer a superior level of dealing with human insufficiency as compared to secular methods of coping. It is therefore, hardly surprising that several individuals with mental health illness seek comfort in religion as a means to cope. People with schizophrenia have the same spiritual needs as any other human being. Studies have

shown that 61-80% of patients use spirituality as a method of coping, and 30% turned to religious faith after the onset of illness (36,37). This method of coping has been established to have increased insight and a better adherence to medications. However, research so far, has primarily focused on patients and their belief systems, with emphasis being during the acute part of the illness, with few studies examining patients in remitted states, and fewer still turning their attention on the relatives of patients diagnosed as schizophrenia.

1.3.3.1 In Mental Illness

Spirituality is an important aspect of mental health. Historically, there has been significant discord and conflict between religion and psychiatry. With the emergence of psychiatry as a discipline, religion was branded as problematic. Sigmund Freud's firm atheistic stance was widely followed by other practitioners of psychoanalysis, further cementing the dwindling importance of religion in the field of psychiatry. Concurrently, the medicalization of mental health alarmed and alienated members of the clergy who viewed psychiatry as being dangerous and anti-Christian. Although Freud considered religion to be on par with illusion and neurosis, Jung considered the psyche to be the carrier of truth, powerfully rooted in the unconscious mind. In the last 30 years, American psychiatrists have turned a more receptive stance towards religion and spirituality. The various domains of psychiatric disorders can be either directly or indirectly connected to religion. The absence of spirituality can lead to problems in interpersonal relationships, which could contribute to the onset and growth of psychiatric disturbances. Multiple psychiatric symptoms have religious connotations. It is well known that a lack of interest in religious practices is a common symptom of depression,

while distorted rituals are seen in schizophrenia and some states and experiences (visions, trance) are prone to misdiagnosis as psychiatric conditions. An understanding of the spiritual background of the patient is vital in the management of the same. Spirituality is also of importance in the prognosis of psychiatric disorders with regards to cure and healing. Psychotherapy is generally focused on the acceptance of one's limitations, and transformation of the same into a life of adaptation and usefulness.

Research has shown that religion and spirituality have a positive influence on the overall quality of life of patients. The beneficial effects have been documented in depression, stress, eating disorders, suicide, personality and negative symptoms of schizophrenia. Additionally, there is a protective factor in relation to adherence to treatment strategies. Religion and spirituality also have an impact on substance use disorders. It is associated with a more optimistic life orientation, increased resilience to stress, greater perceived social support, lower levels of anxiety as well as openness to change, particularly in the context of the twelve-step programmes.

Individuals with mental illness benefit from being surrounded by a positive religious community. Religious beliefs and practices may help people to better cope with stressful life circumstances and give them comfort, meaning, a sense of control, and hope. Religious practices lead to greater life satisfaction, positive affect and higher morale. A belief in God has been associated with better treatment outcomes. Belief in a benevolent God is associated with less social anxiety, paranoia, obsessions and compulsions.

Emerging research has illustrated the beneficial effects of religion in mental health – in terms of increased mental well-being, higher quality of life, and lower rates of depression, anxiety and suicide. Despite these positive indications, there is also a growing

body of literature which demonstrates that there can be a negative facet to religion, with struggles related to faith becoming a source of stress and worry. Multiple studies have shown that spirituality and religious beliefs strengthen coping strategies in response to stressors and promote mental well-being. Research has shown the validation of religious beliefs as protective against substance use, marital discord, school performance and suicide.

Pargament et al identified the following major types of religious coping – collaborative, with equal responsibility for coping being shared by God and the individual; deferring, with passive laying of responsibility onto God; and self-directing, with active taking of initiative to solve problems, leaving God out of the equation. The collaborative and self-directing methods were linked to greater psychological self-sufficiency, while the deferring method was related to decreased levels of psychological competence (38).

Comprehensive research evidence (35) shows that spirituality and religiousness reduces symptoms, severity and relapse rate, enhances and quickens recovery, while reducing distress and disability. Spirituality can significantly affect the presentation of mental disorders, especially during times of stress, bereavement, suffering and loss, because of which, it is of strategic importance in the field of mental health. Swinton and Patton referred to spirituality as the 'forgotten dimension' of mental health care. They also correlated religious and spiritual aspects with desirable health outcomes. According to Russel's model of wellbeing, spiritual health forms the overall umbrella under which all

other dimensions are united. In this model, it is not necessarily oriented solely towards religion, but rather towards a person's individual philosophy, value and meaning of life.

McLaughlin showed that 67% of mental health consumers felt that their spirituality helped them cope with psychiatric issues (39).

The findings of another study on inpatients of a Los Angeles mental health facility revealed that the majority of patients wanted to be asked about their spirituality (40). They further stated the need for spiritual resources to provide interventions such as comfort, companionship, conversation and consolation during their hospital stay.

A systematic review of all quantitative articles published for more than 10 years in the American Journal of Psychiatry, and the Archives of General psychiatry found that 72% of the findings revealed a positive clinical association between religious commitment and mental health, 16% were negative, and 12% were non-significant (41).

In a study of 356 patients in the United States with severe mental illness, investigators compared religious coping between those with schizophrenia, schizoaffective, bipolar and depressive disorder. Results showed that patients with chronic schizophrenia had utilized religious coping to a greater extent. Among the 100 patients with schizophrenia, 70% got high scores in the Royal Free Interview for Spiritual and Religious Beliefs scale.

The results also showed a positive association of spirituality with income, occupation and religion of the patients (58).

In another study conducted over the internet in England, investigators examined the prevalence of alternative health practices of 157 patients with schizophrenia, bipolar disorder or major depression. 52% of patients with schizophrenia reported that the most common alternative health practice adopted to cope was spiritual activity (42).

Nursing students in Maryland conducted a spiritual intervention study with 20 patients with schizophrenia, with the results indicating that these patients were more amenable to express their concerns verbally, ventilate anger and frustration, and deal with feelings and emotions.

Another study on 115 patients in Geneva showed that religion was central in the lives of 45 patients, while 60% used religion as a means of coping with their illness (43).

Lukoff (59) showed that 30% of 74 patients diagnosed with acute psychosis reported an increase in religious faith following the onset of their illness, with 61% reporting that they used religion as a means of coping to get better. He stated that patients with serious mental illnesses use religion to cope regularly and the intensity of religious beliefs is not associated with psychopathology. In many instances, practices such as worship and

prayer appear to protect against the severity of psychiatric symptoms and enhance life satisfaction and overall functioning of the mentally ill.

1.3.3.2 In Schizophrenia

Religion is salient in the lives of many patients suffering from schizophrenia. However, research, especially in the field of psychiatry rarely addresses this issue. It has been widely accepted that religious beliefs and religious delusions lie on a continuum with varied implications across different cultures. For example, in certain Scandinavian countries, Christians believe that demons are causative of mental health problems. Religion has been seen to have an impact, which is not always positive, on comorbid substance use and attempts of deliberate self harm in people suffering from schizophrenia. In many shared anecdotes of patients, religion is often a pathway of self-discovery, awareness and recovery. However, in some cases, religion may become a part of the problem as well a part of the recovery. Some patients are upheld by their faith communities, and derive comfort and strength from their belief systems. Others are rejected by their communities, burdened by their spiritual activities and often demoralized by the same set of religious beliefs. The relevance of religion in the management of people with schizophrenia is that it reduces psychopathology, enhances coping strategies and may foster remission (43).

A study on the factors in the course and outcome of schizophrenia was conducted in the Department of psychiatry, Christian Medical College, Vellore. It was a collaborative study among three centers—Vellore, Madras and Lucknow. A two-year and five-year

follow up showed that those patients who spent more time in religious activities tended to have a better prognosis (44,45).

1.3.4 RESEARCH STUDIES

1.3.4.1 International Data

Studies in the west, specifically in the European and North American populations have shown that religious practices were common in psychiatric patients, including schizophrenics. Even so, religious and spiritual dimensions have not been completely considered in psychiatric research (46). The factors involved in the neglect of these issues may include the following – religiously inclined psychiatrists being underrepresented, lack of awareness of religion and spirituality in mental health professionals, and the tendency to pathologize these aspects by the same. An added disadvantage would point towards the rivalry between religious and health professionals stemming from the fact that both are primarily concerned with the assuaging of human suffering. A physician, even when not a believer, is genuinely concerned about the patient, and this interaction which has spiritual connotations, would be similar to a confessional, which would gradually replace the need for formal religion. Nevertheless, in the past few years, there has been a growing body of literature concerned with the relevance of religion and spirituality on mental health. The World Health Organization has recognized the importance of spirituality and religious beliefs in the formal assessment of quality of life. Postulated links to health outcomes include behavioral mechanisms (healthier lifestyle), social mechanisms (supportive communities), psychological mechanisms (views about

life, death, God, ethics, interpersonal relationships) and physiological mechanisms (relaxation responses).

Koenig, in his review of 43 studies which examined the relationship between spiritual and religious beliefs and schizophrenia, reported that 33% had an inverse relationship with respect to psychotic symptoms, 23% a positive relationship and the rest showing mixed or complex results. The positive correlates were significantly linked to religious delusions. He recommended integration of spiritual beliefs into clinical practice based on the following – unmet spiritual needs of the mentally ill, improved coping skills, influence on compliance, influence on medical benefits, awareness of the clinician's own beliefs and utilization in treatment, supportive faith community and implications on health care costs (47).

A multi-site comparative study of spiritual and religious aspects of schizophrenic patients in Switzerland, Canada and the United States showed that religion was important, higher involved than in the general population, provided a positive sense of self and coping in 87%. This was associated with improved mental, clinical and general status of the patients as against 13% who had a harmful view of religion. Additionally, religion was sometimes seen to be hindering with and in conflict with treatment (46).

A study comparing clinicians in Geneva and Quebec found that most of the physicians in both settings were unaware of the religious beliefs of their patients with chronic

psychosis. This was despite a majority of the patients claiming that religion played an important role in their life (48).

A study in Geneva established the protective role played by religion in the risk of suicide in patients with schizophrenia. This was as a measure of religious coping and ethical condemnation of suicide. It was also found that there was no difference in the protection offered by religion between psychotic and non-psychotic groups (49).

Smith et al, described how community-based individuals with schizophrenia used spirituality as a means to cope with their illness, explain their experiences, make meaning of their lives and renew their sense of empowerment by choosing their own personal beliefs (50).

Nolan et al, indicated the importance of spirituality and religiosity in coping in patients with schizophrenia. 91% of patients reported following faith-based practices. The study concluded that there was a positive relationship between religious coping and higher quality of life, with the converse being held true as well (51).

A case control study conducted in Egypt examined 40 older patients with schizophrenia, comparing 20 of them who reported spiritual healing with the rest who had not. Relapses over an 18 month period were retrospectively examined. Results indicated that subjects

reporting a spiritual healing relapsed more often (17/20), than those without such experiences (12/20). This was controversial to the positive findings of other studies (52).

1.3.4.2 Indian Data

Shah et al provided vital information on the nature of personal belief systems as well as coping strategies of patients with severe mental illness. It showed that that a grounded spiritual or religious belief system positively affirmed active and adaptive coping skills in individuals with schizophrenia. Further, patients with better spiritual, religious, or personal belief system had lower negative symptoms (5).

A study was conducted in NIMHANS on 31 patients with schizophrenia who stayed at temples for an average of 6 weeks. Results showed that clinical improvements with spiritual approaches could explain the better outcomes observed (53).

Rammohan et al. studied religious coping and psychological well-being in caregivers of relatives with schizophrenia in a sample of 60 caregivers; evaluating: intensity of the religious beliefs, perceived burden, religiosity and other coping strategies and psychological wellbeing. The results showed that the strategies of negation and problem resolution, intensity of religious beliefs and perceived burden, were significant indicators of well-being (54).

Stanley et al, based on their study in a community-based care centre for the mentally ill in Tamil Nadu, concluded that an integrated approach including spiritual therapy enhances the effectiveness of other treatment modalities, even though studies have shown that families of patients with chronic schizophrenia in urban India rarely subscribe to supernatural causation of the illness (47).

1.4 RATIONALE FOR THE STUDY

In the past, psychiatry has largely ignored the role of religion, however more recently a bio-psycho-socio-spiritual approach has gained popularity in the attempt to better understand the experience of mental illness. It is evident that religion and spirituality influence many aspects of life in the individual with mental illness as well as that of the caregiver. It has been shown that contrary to popular belief, patients with schizophrenia and their relatives do feel at ease when discussing their personal beliefs and styles of coping. The exploration of these relationships can provide clinicians with a better understanding of the experiences of those patients and families whom we seek to help. It can also help us provide care that is more relevant and nuanced. This study was planned to assess the role of religion and spirituality in influencing coping strategies of relatives of patients with mental illness, to improve the understanding of these issues and plan for strategies for appropriate intervention.

Aim: To measure spirituality/religiosity and its relation to coping strategies in carers of patients with schizophrenia.

Objectives:

i. To assess coping patterns in carers of patients with schizophrenia.

ii. To assess spirituality in carers of patients with schizophrenia.

iii. To assess the relationship between spirituality and coping among the carers of patients with schizophrenia and selected relevant demographic characteristics of the carer, as well as patients' clinical characteristics.

3.1 STUDY DESIGN

This was an observational study.

3.2 SETTING

This study was carried out in patients attending the outpatient clinics in the Department of Psychiatry, Christian Medical College. This 122-bed hospital provides short-term care for patients with all types of psychiatric diagnoses from the town of Vellore and a wider rural area beyond. It also functions as a tertiary referral centre for management of patients with mental and behavioral disorders from different parts of India. The emphasis is on a multidisciplinary approach and eclectic care using a wide variety of pharmacological and psychological therapies. The hospital has a daily outpatient clinic in which 400-450 patients are seen. Patients were recruited over a period of 12 months. Following recruitment participants were interviewed at a single point in time.

3.3 PARTICIPANTS

Consecutive patients with schizophrenia who satisfied *International Classification of Diseases - 10* (ICD-10) diagnostic criteria for schizophrenia (WHO, 1992) and their primary caregivers, attending the outpatient clinic were contacted for possible recruitment to the study. Informed consent was obtained. Subjects above the age of 18 years, who speak Tamil, were eligible to take part. Subjects with severe language, hearing or cognitive impairment were excluded. Patients with a primary mood disorder, substance use disorder or organic disorder were also excluded.

3.4 VARIABLES

Patients who consented to take part in the study were assessed for sociodemographic and clinical variables (duration and severity of illness, treatment variables etc); Positive and Negative Symptom Scale was used to rate symptom severity in patients. Carer spirituality was assessed with the Royal Free Interview for Religious and Spiritual Beliefs, coping was assessed with the Modified Jalowiec Coping Scale and the General Health Questionnaire -12 was administered to screen for the presence of common mental disorders. Socio-demographic details for carers were also recorded.

Sources of data included patients, carers and case records.

3.5 DATA MEASUREMENT

3.5.1 Positive and Negative Syndrome Scale (PANSS) (Kay et al, 1986) to assess symptom profile.

The PANSS is used to evaluate persons with schizophrenia and other psychotic disorders in clinical and research settings. It is an operationalized, standardized, drug-sensitive instrument that provides a balanced representation of positive and negative symptoms and gauges their relationship to one another and to global psychopathology.

3.5.2 The Royal Free Interview for Spiritual and Religious beliefs

The Royal Free Interview for Spiritual and Religious Belief was developed and validated by King et al. (1995). The interview contains a spiritual scale that sums answers to seven visual analogue questions on the strength with which a spiritual belief is held. Each scale has a score ranging from 0 – 10 and the maximum score is 70. High scores (above the

mid value of the maximum score) indicate that respondents have higher spirituality and hold strongly to their beliefs which have a major role in their life, whereas scores below the mid value indicates lower spirituality. The spiritual scale has a high validity (high score co-relates with frequent religious observant) and internal and test-retest reliability (alpha 0.81, intra class co-relation of 0.95). The Tamil version of this scale has been used regularly in this department.

3.5.3 Modified Jalowiec Coping Scale

The Jalowiec Coping Scale (JCS) was developed in 1977 and was later revised in 1987 and 2003. It is a tool that has been widely used in adults and adolescents with variety of health and illness states including mental illness. The Modified Jalowiec coping scale (MJCS) is a 22 item objective questionnaire based on Lazarus and Folkman's theory of stress, appraisal, and coping. The scale lists specific coping behaviors under 7 coping strategies: confrontative, evasive, optimistic, emotive, palliative, supportant and self-reliant. Participants indicate responses to each item on two Likert scales, first identifying how often they have used the strategy [0-never used to 3 -often used), and second, indicating how helpful it has been to them (0-not helpful to 3-very helpful). A higher score denoted a more frequent use or greater helpfulness of the particular coping strategy. The JCS is a well established instrument. Its content validity and reliability coefficient are found to be high. The Tamil version of this scale has been used regularly in the department.

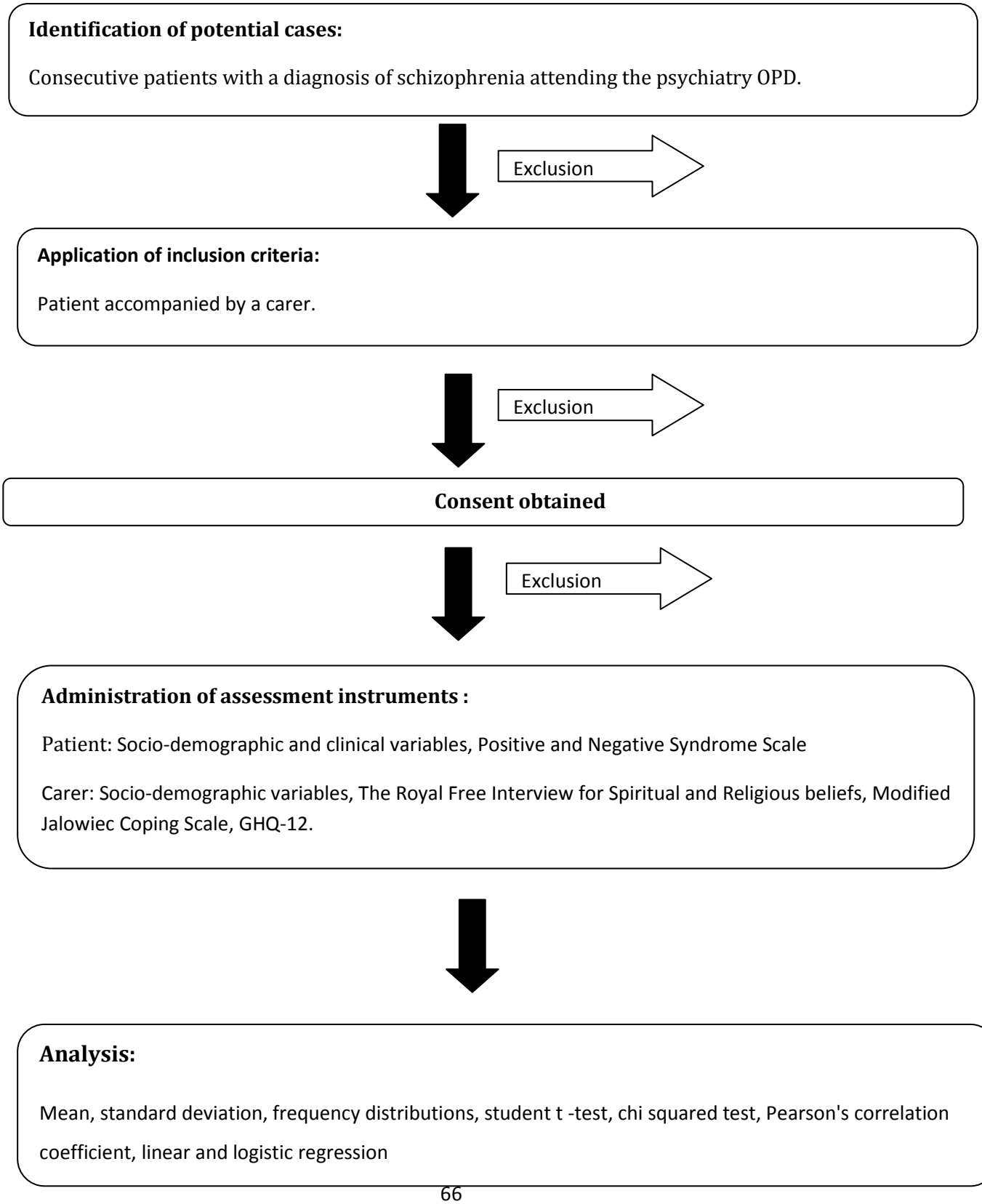
3.5.4 General Health Questionnaire -12

The 12-item General Health Questionnaire (GHQ-12) is used to screen for common mental disorders (CMD) in primary care and has been validated in different languages and cultures. It is a quick, reliable and sensitive short form. It is a self-administered questionnaire that focuses on two major areas – the inability to carry out normal functions and the appearance of new and distressing phenomena. The Tamil version has been validated for use in a rural setting in southern India; a total score of 4 or more implies a high probability of a common mental disorder.

3.5.5 Proforma for sociodemographic and clinical variables

Details regarding socio-demographic variables and clinical details were recorded in the proforma enclosed.

FLOWCHART OF RECRUITMENT OF SUBJECTS:



3.6 STATISTICAL METHODS

3.6.1 DETERMINATION OF SAMPLE SIZE

The sample size for the study was determined using the formula $4pq/d^2$. The calculations were based on the following assumptions: p=Estimated prevalence of religion resulting in positive coping with the illness among patients with schizophrenia=87% (based on earlier studies); q=100-p; d=precision =7. The sample size thus obtained was 92. A total of 92 patients were recruited (46).

3.6.2 DATA ANALYSIS

The statistical software SPSS for Windows (version 16.0.1) was employed for the analysis of data. Mean and standard deviation were employed to describe continuous variables, while frequency distributions were obtained for categorical data. The chi square test and the Student's t-test were used to assess the significance of associations for categorical and continuous variables respectively.

4 .1 SUBJECTS

4.1.1 THE STUDY SAMPLE

A total of 92 subjects who fulfilled eligibility criteria were contacted; all agreed and were recruited after obtaining informed consent.

4.2 SOCIODEMOGRAPHIC PROFILE OF SAMPLE

Tables 4.1 and 4.2 document the sociodemographic profile of the sample. Among the relatives (Table 4.1), the mean age of the participants was 45 years with a range between 21 and 75 years. 67 (72.8%) lived with the patient. Most were a parent (35.9%) or spouse (34.8%), men (64. 1%) and married (78.3%). Most lived in their own home (75%) and the average number of people living in the house was 4. 20 (21.8%) were housewives, 14 (15.2%) were coolies while 55 (51.7%) were otherwise employed. Many patients were from a low socio-economic background. The mean monthly family income was rupees 9646.7and 49 (53.3%) had debts. 2 people (2.2%) had only two meals a day. The mean number of years of education was 9.3 years and the majority (89.1%) of the participants were able to read and write. 27 (29.3%) had co-morbid medical illness and the majority (87%) denied substance abuse. The majority (80.4%) belonged to the Hindu faith. 67 (72.8%) perceived that they had social support. 15 (16.3%) scored four or more on the GHQ qualifying for caseness.

Table 4.2 documents the sociodemographic profile of the patients. The mean age was 34.3 years with a range between 19 and 60 years. The majority were married (52.2%), women (58.7%), belonged to the Hindu religion (80.4%), were housewives (45.7%), or unemployed (30.4%). The mean of years of education was 10.63 months (s.d =4.4).

Table 4.1 Sociodemographic profile of caregivers

Characteristic	Score	Range
Age, years: mean (s.d.)	45.03 (13.3)	21-75
Gender, *n* (%)		
Male	59 (64,1)	
Female	33 (35.9)	
Relationship to patient, *n* (%)		
Parent	33 (35.9)	
Spouse	32 (34.8)	
Child	9 (9.8)	
Sibling	10 (10.9)	
Other	9 (8.7)	
Religion, *n* (%)		
Hindu	74 (80.4)	
Christian	10 (10.9)	
Muslim	8 (8.7)	
Literacy, *n* (%)		
Read and write	82 (89.1)	
Illiterate	10 10.9)	
Schooling, years: mean (s.d)	9.3 (4.3)	0-18
Marital status, *n* (%)		
Married	72 (78.3)	
Single	12 (13)	
Widow/er	8 (8.7)	
Housing, *n* (%)		
Own	69 (75)	
Rented	23 (25)	
Meals per day, *n* (%)		
2	2 (2.2)	
3	90 (97.8)	

Contd. Sociodemographic profile of caregivers		
Number of people living in the house:mean (s,d)	4.3 (2.06)	1-17
Living with patient, *n* (%)		
no	25 (27.2)	
yes	67 (72.8)	
Monthly family income, rupees: mean (s.d.)	9646.7 (13378.6)	0-100000
Debt, *n* (%)		
no	43 (46.7)	
yes	49 (53.3)	
Amount of debt, rupees: mean (s.d)	150490 (290823)	0-2000000
Occupation, *n* (%)		
Housewife	20 (21.8)	
Coolie	14 (15.2)	
Unemployed	3 (3.3)	
Other employments	55(59.7)	
Physical illness, *n* (%)		
no	65 (70.7)	
yes	27 (29.3)	
Substance use, *n* (%)		
no	80 (87)	
yes	20 (13)	
Perceived social support, *n* (%)		
Absent	25 (27.2)	
Present	67 (72.8)	
Case by GHQ, *n* (%)		
no	77 (83.7)	
yes	15 (16.3)	

Table 4.2 Sociodemographic profile of patients

Characteristic	Score	Range
Age, years: mean (s.d.)	34.3 (9.8)	19-60
Gender, *n* (%)		
Male	38 (41.3)	
Female	54 (58.7)	
Religion, *n* (%)		
Hindu	74 (80.4)	
Christian	10 (10.9)	
Muslim	8 (8.7)	
Schooling, years: mean (s.d.)	10.6 (4.4)	0-18
Marital status, *n* (%)		
Married	48 (52.2)	
Single	30 (32.6)	
Widow/er	4 (4.3)	
Separated/divorced	10 (10.9)	
Monthly family income, rupees: mean (s.d.)	3451.1(12665.6)	0-100000
Occupation, *n* (%)		
Unemployed	28 (30.4)	
Employed	22 (23.9)	
Housewife	42 (45.7)	

4.3 CLINICAL PROFILE OF PATIENTS

The majority of patients were on antipsychotic medication alone (44.6%) or in combination with other drugs (48.9%); many were compliant (46.7%) and complained of side-effects (58.5%). Most (87%) had not had ECT or attempted self harm at any time (71.7%). There was no history of substance use or medical comorbidity in most patients (84.8% and 78.3% respectively). The mean age of onset of illness was 28.8 years and the mean duration of illness was 67.6 months. Mean PANSS scores were 12.5 on the positive subscale, 14.1 on negative subscale, 25.3 on the general psychopathology subscale and 51.8 on the total score. 38% of the relatives reported to have been subject to violence from the patient.

Table 4.3 Clinical profile of patients

Characteristic	Score	Range
PANSS positive score: mean (s.d.)	11.5 (5.2)	7-31
PANSS negative score: mean (s.d.)	12.0 (6.1)	7-30
PANSS general psychopathology score: mean (s.d.)	24.0 (6.9)	13-46
Total PANSS score: mean (s.d.)	50.0 (15.52)	30-97
Age of onset of illness, years:mean (s.d.)	28.8 (9.2)	15-57
Duration of illness, months:mean (s.d)	67.6 (62.5)	2-276
Medication, *n* (%)		
Antipsychotic only	41 (44.6)	
Antipsychotic and other drug	45 (48.9)	
Other	6 (6.5)	
Side effects, *n* (%)		
No	38 (41.3)	
Yes	54 (58.7)	
Compliance, *n* (%)		
Poor	19 (20.7)	
Occasional miss	30 (32.6)	
Good	43 (46.7)	
Received ECT, *n* (%)		
No	80 (87)	
Yes	12 (13)	
Deliberate self harm, *n* (%)		
No	66 (71.7)	
Yes	26 (28.3)	

4.4 COPING METHODS IN CAREGIVERS

4.4.1 Types and frequency

Tables 4.4.1, 4.4.2 and 4.4.3 document the different coping strategies that carers reported they used in dealing with their ill relative. The most commonly reported coping strategy was the optimistic type (mean score 76) of which 'Hoped that things would get better', 'Told yourself not to worry because everything would work out fine' and 'Tried to think positively' were the common strategies employed.

Other commonly used strategies included the evasive (mean score 72) and confrontative (mean score71) methods. The least commonly used were the palliative (mean score 58) and supportative (mean score 54) methods.

Of all the methods, 'Wished that the problem would go away' from the evasive subgroup, 'Hoped that things would get better' and 'Tried to think positively' from the optimistic subgroup, were the most popular methods used. 'Talked the problem over with someone who had been in a similar situation' was the least commonly employed strategy.

Table 4.4.1 Coping methods in carers

COPING METHODS	How often have you used each coping method?	
	n	%
Confrontative		
1.Thought out different ways to handle the situation		
Never	15	16.3
Seldom	10	10.9
Sometimes	42	45.7
Often	25	27.2
2.Tried to look at the problem objectively and see all sides		
Never	15	16.3
Seldom	12	13.0
Sometimes	43	46.7
Often	22	23.9
3.Tried to keep the situation under control		
Never	7	7.6
Seldom	6	6.5
Sometimes	50	54.3
Often	29	31.5
4.Tried to handle things one step at a time		
Never	12	13.0
Seldom	8	8.7
Sometimes	43	46.7
Often	29	31.5
Evasive		
5.Tried to put the problem out of your mind and think of something else		
Never	30	32.6
Seldom	4	4.3
Sometimes	32	34.8
Often	26	28.3
6.Wished that the problem would go away		
Never	4	4.3
Seldom	2	2.2
Sometimes	33	35.9
Often	53	57.6
Optimistic		
7.Hoped that things would get better		
Never	4	4.3
Seldom	2	2.2
Sometimes	25	27.2
Often	61	66.3
8.Told yourself not to worry because everything would work out fine		
Never	3	3.3
Seldom	5	5.4
Sometimes	26	28.3
Often	58	63.0

Contd. Coping methods in carers		
9.Tried to keep a sense of humor		
Never	12	13.0
Seldom	13	14.1
Sometimes	38	41.3
Often	29	31.5
10.Thought about the good things in your life		
Never	11	12.0
Seldom	8	8.7
Sometimes	36	39.1
Often	37	40.2
11.Tried to think positively		
Never	1	1.1
Seldom	5	5.4
Sometimes	36	39.1
Often	50	54.3
12.Tried to see the good side of the situation		
Never	19	20.7
Seldom	13	14.1
Sometimes	36	39.1
Often	24	26.1
Emotive		
13.Worried about the problem		
Never	5	5.4
Seldom	9	9.8
Sometimes	25	27.2
Often	53	57.6
14.Got mad and let off steam		
Never	23	25.0
Seldom	14	15.2
Sometimes	35	38.0
Often	20	21.7
Palliative		
15.Tried to distract yourself by doing something that you enjoy		
Never	29	31.5
Seldom	9	9.8
Sometimes	34	37.0
Often	20	21.7
16.Tried to keep busy		
Never	21	22.8
Seldom	9	9.8
Sometimes	27	29.3
Often	35	38.0
Supportant		
17.Talked the problem over with family or friends		
Never	19	20.7
Seldom	4	4.3
Sometimes	33	35.9
Often	36	39.1

Contd. Coping methods in carers		
18.Talked the problem over with someone who had been in a similar situation		
Never	45	48.9
Seldom	8	8.7
Sometimes	28	30.4
Often	11	12.0
Self-reliant		
19.Kept your feelings to yourself		
Never	25	27.2
Seldom	7	7.6
Sometimes	28	30.4
Often	32	34.8
20.Wanted to be alone to think things out		
Never	22	23.9
Seldom	12	13.0
Sometimes	32	34.8
Often	26	28.3
21.Tried to keep your feelings under control		
Never	13	14.1
Seldom	9	9.8
Sometimes	42	45.7
Often	28	30.4
22.Preferred to work things out yourself		
Never	16	17.4
Seldom	9	9.8
Sometimes	36	39.1
Often	31	33.7

Table 4.4.2 Mean scores of frequency of coping methods used

COPING METHODS	How often have you used each coping method?	
	n	**%**
1.Thought out different ways to handle the situation		
Never/seldom	25	27.2
Sometimes/often	67	72.8
2.Tried to look at the problem objectively and see all sides		
Never/seldom	27	29.3
Sometimes/often	65	70.7
3.Tried to keep the situation under control		
Never/seldom	13	14.1
Sometimes/often	79	85.9
4.Tried to handle things one step at a time		
Never/seldom	20	21.7
Sometimes/often	72	78.3
CONFRONTATIVE – MEAN SCORE		
Never/seldom	**21.25**	
Sometimes/often	**70.75**	
5.Tried to put the problem out of your mind and think of something else		
Never/seldom	34	37.0
Sometimes/often	58	63.0
6.Wished that the problem would go away		
Never/seldom	6	6.5
Sometimes/often	86	93.5
EVASIVE –MEAN SCORE		
Never/seldom	**20**	
Sometimes/often	**72**	
7.Hoped that things would get better		
Never/seldom	6	6.5
Sometimes/often	86	93.5
8.Told yourself not to worry because everything would work out fine		
Never/seldom	8	8.7
Sometimes/often	84	91.3
9.Tried to keep a sense of humor		
Never/seldom	25	27.2
Sometimes/often	67	72.8
10.Thought about the good things in your life		
Never/seldom	19	20.7
Sometimes/often	73	79.3
11.Tried to think positively		
Never/seldom	6	6.5
Sometimes/often	86	93.5
12.Tried to see the good side of the situation		
Never/seldom	32	34.8
Sometimes/often	60	65.2

Contd. Mean scores of frequency of coping methods used		
OPTIMISTIC –MEAN SCORE Never/seldom Sometimes/often	 **16** **76**	
13.Worried about the problem Never/seldom Sometimes/often	 14 78	 15.2 84.8
14.Got mad and let off steam Never/seldom Sometimes/often	 37 55	 40.2 59.8
EMOTIVE –MEAN SCORE Never/seldom Sometimes/often	 **25.5** **66.5**	
15.Tried to distract yourself by doing something that you enjoy Never/seldom Sometimes/often	 38 54	 41.3 58.7
16.Tried to keep busy Never/seldom Sometimes/often	 30 62	 32.6 67.4
PALLIATIVE –MEAN SCORE Never/seldom Sometimes/often	 **34** **58**	
17.Talked the problem over with family or friends Never/seldom Sometimes/often	 23 69	 25.0 75.0
18.Talked the problem over with someone who had been in a similar situation Never/seldom Sometimes/often	 53 39	 57.6 42.4
SUPPORTATIVE MEAN SCORE Never/seldom Sometimes/often	 **38** **54**	
19.Kept your feelings to yourself Never/seldom Sometimes/often	 32 60	 34.8 65.2
20.Wanted to be alone to think things out Never/seldom Sometimes/often	 34 58	 37.0 63.0
21.Tried to keep your feelings under control Never/seldom Sometimes/often	 22 70	 23.9 76.1
22.Preferred to work things out yourself Never/seldom Sometimes/often	 25 67	 27.2 72.8
SELF RELIANT- MEAN SCORE Never/seldom Sometimes/often	**28.25** **63.75**	

Table 4.4.3 Frequency of use of coping methods

COPING METHOD	FREQUENCY OF USE (mean score)
CONFRONTATIVE	70.75
EVASIVE	72
OPTIMISTIC	76
EMOTIVE	66.5
PALLIATIVE	58
SUPPORTATIVE	54
SELF RELIANT	63.75

4.4.2 Usefulness

Tables 4.4.4, 4.4.5 and 4.4.6 document the perceived usefulness of the different coping strategies that carers reported they used in dealing with their ill relative.

The most useful method was the optimistic (mean score 75.16) while the emotive methods were considered least useful (mean score 23).

'Hoped that things would get better', 'Told yourself not to worry because everything would work out fine' and 'Tried to think positively' - from the optimistic methods - were considered the most useful, while 'Worried about the problem' and 'Got mad and let off steam' - from the emotive methods - were considered least useful.

Table 4.4.4 Usefulness of coping strategy

COPING METHODS	If you have Sometimes/often that coping method, how helpful was it?	
	n	%
1.Thought out different ways to handle the situation		
Never	22	23.9
Seldom	10	10.9
Sometimes	52	56.5
Often	8	8.7
2.Tried to look at the problem objectively and see all sides		
Never	20	21.7
Seldom	13	14.1
Sometimes	47	51.1
Often	12	13.0
3.Tried to keep the situation under control		
Never	9	9.8
Seldom	10	10.9
Sometimes	60	65.2
Often	13	14.1
4.Tried to handle things one step at a time		
Never	14	15.2
Seldom	8	8.7
Sometimes	45	48.9
Often	25	27.2
5.Tried to put the problem out of your mind and think of something else		
Never	31	33.7
Seldom	3	3.3
Sometimes	38	41.3
Often	20	21.7
6.Wished that the problem would go away		
Never	6	6.5
Seldom	4	4.3
Sometimes	53	57.6
Often	29	31.5
7.Hoped that things would get better		
Never	5	5.4
Seldom	1	1.1
Sometimes	43	46.7
Often	43	46.7

Contd. Usefulness of coping strategy		
8.Told yourself not to worry because everything would work out fine		
Never	3	3.3
Seldom	4	4.3
Sometimes	39	42.4
Often	46	50.0
9.Tried to keep a sense of humor		
Never	13	14.1
Seldom	11	12.0
Sometimes	48	52.2
Often	20	21.7
10.Thought about the good things in your life		
Never	11	12.0
Seldom	10	10.9
Sometimes	42	45.7
Often	29	31.5
11.Tried to think positively		
Never	1	1.1
Seldom	7	7.6
Sometimes	46	50.0
Often	38	41.3
12.Tried to see the good side of the situation		
Never	23	25.0
Seldom	12	13.0
Sometimes	40	43.5
Often	17	18.5
13.Worried about the problem		
Never	40	43.5
Seldom	30	32.6
Sometimes	17	18.5
Often	5	5.4
14.Got mad and let off steam		
Never	49	53.3
Seldom	19	20.7
Sometimes	22	23.9
Often	2	2.2
15.Tried to distract yourself by doing something that you enjoy		
Never	33	35.9
Seldom	8	8.7
Sometimes	34	37.0
Often	17	18.5

Contd. Usefulness of coping strategy		
16.Tried to keep busy		
Never	21	22.8
Seldom	9	9.8
Sometimes	35	38.0
Often	27	29.3
17.Talked the problem over with family or friends		
Never	19	20.7
Seldom	4	4.3
Sometimes	39	42.4
Often	30	32.6
18.Talked the problem over with someone who had been in a similar situation		
Never	46	50.0
Seldom	7	7.6
Sometimes	29	31.5
Often	10	10.9
19.Kept your feelings to yourself		
Never	33	35.9
Seldom	11	12.0
Sometimes	40	43.5
Often	8	8.7
20.Wanted to be alone to think things out		
Never	27	29.3
Seldom	14	15.2
Sometimes	41	44.6
Often	10	10.9
21.Tried to keep your feelings under control		
Never	15	16.3
Seldom	14	15.2
Sometimes	46	50.0
Often	17	18.5
22.Preferred to work things out yourself		
Never	21	22.8
Seldom	10	10.9
Sometimes	40	43.5
Often	21	22.8

Table 4.4.5 Mean scores of usefulness of coping methods

COPING METHODS	How useful have you found each coping method?	
	n	%
1.Thought out different ways to handle the situation		
Never/seldom	32	34.8
Sometimes/often	60	65.2
2.Tried to look at the problem objectively and see all sides		
Never/seldom	33	35.9
Sometimes/often	59	64.1
3.Tried to keep the situation under control		
Never/seldom	19	20.7
Sometimes/often	73	79.3
4.Tried to handle things one step at a time		
Never/seldom	22	23.9
Sometimes/often	70	76.1
CONFRONTATIVE –MEAN SCORE		
Never/seldom	26.5	
Sometimes/often	65.5	
5.Tried to put the problem out of your mind and think of something else		
Never/seldom	34	37.0
Sometimes/often	58	63.0
6.Wished that the problem would go away		
Never/seldom	10	10.9
Sometimes/often	82	89.1
EVASIVE –MEAN SCORE		
Never/seldom	22	
Sometimes/often	70	
7.Hoped that things would get better		
Never/seldom	6	6.5
Sometimes/often	86	93.5
8.Told yourself not to worry because everything would work out fine		
Never/seldom	7	7.6
Sometimes/often	85	92.4
9.Tried to keep a sense of humor		
Never/seldom	24	26.1
Sometimes/often	68	73.9
10.Thought about the good things in your life		
Never/seldom	21	22.8
Sometimes/often	71	77.2

Contd.Mean scores of usefulness of coping methods		
11.Tried to think positively		
Never/seldom	8	8.7
Sometimes/often	84	91.3
12.Tried to see the good side of the situation		
Never/seldom	35	38.0
Sometimes/often	57	62.0
OPTIMISTIC –MEAN SCORE		
Never/seldom	**16.83**	
Sometimes/often	**75.16**	
13.Worried about the problem		
Never/seldom	70	76.1
Sometimes/often	22	23.9
14.Got mad and let off steam	68	73.9
Never/seldom		
Sometimes/often	24	26.1
EMOTIVE –MEAN SCORE		
Never/seldom	**69**	
Sometimes/often	**23**	
15.Tried to distract yourself by doing something that you enjoy		
Never/seldom	41	44.6
Sometimes/often	51	55.4
16.Tried to keep busy		
Never/seldom	30	32.6
Sometimes/often	62	67.4
PALLIATIVE –MEAN SCORE		
Never/seldom	**35.5**	
Sometimes/often	**56.5**	
17.Talked the problem over with family or friends		
Never/seldom	23	25.0
Sometimes/often	69	75.0
18.Talked the problem over with someone who had been in a similar situation		
Never/seldom	53	57.6
Sometimes/often	39	42.4
SUPPORTATIVE MEAN SCORE		
Never/seldom	**38**	
Sometimes/often	**54**	
19.Kept your feelings to yourself		
Never/seldom	44	47.8
Sometimes/often	48	52.2

Contd. Mean scores of usefulness of coping methods		
20.Wanted to be alone to think things out		
Never/seldom	41	44.6
Sometimes/often	51	55.4
21.Tried to keep your feelings under control		
Never/seldom	29	31.5
Sometimes/often	63	68.5
22.Preferred to work things out yourself		
Never/seldom	31	33.7
Sometimes/often	61	66.3
SELF RELIANT- MEAN SCORE		
Never/seldom	**36.25**	
Sometimes/often	**55.75**	

Table 4.4.6 Usefulness of coping methods

CONFRONTATIVE	**65.5**
EVASIVE	**70**
OPTIMISTIC	**75.16**
EMOTIVE	**23**
PALLIATIVE	**56.5**
SUPPORTATIVE	**54**
SELF RELIANT	**55.75**

4.5 RESPONSES TO THE ROYAL FREE INTERVIEW FOR SPIRITUAL AND RELIGIOUS BELIEFS

Most people (97.8%) considered themselves as religious and/or spiritual while only 2 people (2.2%) being neither.

Table 4.5.1

Question 1. Understanding of life as religious or spiritual	Number	Percentage
Religious	28	30.4
Spiritual	19	20.7
Religious and Spiritual	43	46.7
Neither religious nor spiritual	2	2.2
Total	92	100

A variety of responses were elicited to the question on the form that the participant's religious or spiritual belief has taken. A large number mentioned believing that God is one (11.9%), while another common theme was that they believed in all the different Gods (217%). 14.1% reported that religion helped to make difficulties more bearable and give peace and comfort to the mind. 5.4% felt that religion was more of a learnt behaviour or routine since childhood. 4.3% felt that the responsibility for things happening in life is one's own. 3.3% mentioned a loss of faith. 3 responded that they did not believe in God or doubted that God is present.

Table 4.5.2

Question 2 **Themes from responses to ` form that your religious / spiritual belief has taken'**	**Number**	**Percentage**
All Gods are one	11	11.9
I believe in all/many Gods, I worship all of them	20	21.7
Sometimes I get answers from God, sometimes not	9	9.8
Good will come if you believe in God	5	5.4
It gives me support/helps me cope with difficulties	13	14.1
It gives me peace of mind	13	14.1
Keeps me safe	1	1.1
It helps me solve my problems	8	8.7
It spares me from difficulties	2	2.2
It saved my life	1	1.1
It provides me with God's love	1	1.1
It helps pain disappear	1	1.1
Religion is done as a routine/learnt in childhood	5	5.4
I had faith in the past, not now after my relative's illness	3	3.3
What happens in my life is my own responsibility	4	4.3
I don't believe in God	1	1.1
I feel God is absent	1	1.1
I doubt if God is there	1	1.1
I don't know much about God	1	1.1

76 (82.7%) of the respondents held strongly to their religious views, with 47 (51.1) reporting their beliefs at the strength of 10 in the scale of 0-10.

Table 4.5.3

Question 3.Strength with which religious / spiritual views are held		Number	Percentage
Weakly held view	0	1	1.1
	1	2	2.2
	2	0	0
	3	1	1.1
	4	0	0
	5	12	13.0
	6	2	2.2
	7	11	12.0
	8	7	7.6
	9	9	9.8
Strongly held view	10	47	51.1
Weakly held	0-4	4	4.4
	5	12	13
Strongly held	6-10	76	82.7

All the respondents reported observing a religion; the majority reported observing Hinduism.

Table 4.5.4

Question 4. Specific religion	Number	Percentage
I do not observe a religion	0	0
Hindu	74	80.4
Muslim	8	8.7
Christian	10	10.9

Table 4.5.5

Question 5: Detail regarding denomination/sect	Frequency	Percent
Acharya	1	1.1
AdiDravida	7	7.6
Aggamudayar	1	1.1
Anafi	1	1.1
Arunjyothi	1	1.1
Assembly of God	1	1.1
Chennudir (BC)	1	1.1
ECI Protestant	1	1.1
Gounder	15	16.3
Kallar	1	1.1
Karni	1	1.1
Karunigar	1	1.1
Konar	1	1.1
Kunguvellalar	1	1.1
Labbe	3	3.3
Lebbi	1	1.1
Mudaliar	9	9.8
Nadar	1	1.1
Naidu	8	8.7
Odeyar	2	2.2
Pentecostal	2	2.2
Protestant CSI	1	1.1
Reddy	1	1.1
Roman Catholic	5	5.4
Saivavelar	1	1.1
Saurashtra	2	2.2
Sengunder	1	1.1
Sunni	1	1.1
Syed	1	1.1
Thakni	1	1.1
Valliyar	1	1.1
Valluvar	2	2.2
Vannar	1	1.1
Vanniyar	9	9.8
Velluvar	1	1.1
Vishwakarma	1	1.1
Yadav	3	3.3

The most common religious/spiritual activity that was reported was prayer (96.7%), followed by ceremony (52.2%), and reading and study (44.6%). 3 (3.3%) participants denied any religious activity.

Table 4.5.6

Question 6. Activities that play a part in belief	**Alone *n* (%)**	**With others *n* (%)**	**Both *n* (%)**	**TOTAL**	**None *n* (%)**
Prayer	32 (34.8)	21 (22.8)	36 (39.1)	89 (96.7)	3 (3.3)
Ceremony	12 (13)	21 (22.8)	15 (16.3)	48 (52.2)	44 (47.8)
A religious service	18 (19.6)	9 (9.8)	7 (7.6)	34 (36.9)	58 (63.0)
Meditation	21 (22.8)	1 (1.1)	3 (3.3)	25 (27.1)	67 (72.8)
Reading and study	28 (30.4)	3 (3.3)	10 (10.9)	41 (44.6)	51 (55.4)
Contact with religious leader	6 (6.5)	3 (3.3)	4 (4.3)	13 (14.1)	79 (85.9)

67 (72.7%) of the participants believed in the necessity of the practice of their religious/spiritual beliefs in day to day life, with a conviction ranging from 6 to 10 on a scale of 0 to 10, while 3 (3.3%) did not believe it was necessary.

Table 4.5.7

Question 7. Importance, necessity of the practice of belief in day-to-day life		Number	Percentage
Not necessary	0	3	3.3
	1	0	0
	2	3	3.3
	3	0	0
	4	3	3.3
	5	16	7.4
	6	4	4.3
	7	7	7.6
	8	9	9.8
	9	11	12
Essential	10	36	39.1
Not necessary	0-4	9	9.9
	5	16	17.4
Essential	6-10	67	72.7

67 (72.7%) of the participants believed that spiritual powers can influence events in daily life while 4 people (4.3%) believed it had no influence.

Table 4.5.8

Question 8. Belief that spiritual power or force can *influence* what happens to one in day-do-day life		**Number**	**Percentage**
No influence	0	4	4.3
	1	0	0
	2	0	0
	3	4	4.3
	4	1	1.1
	5	13	14.1
	6	2	2.2
	7	9	9.8
	8	6	6.5
	9	9	9.8
Strong influence	10	44	47.8
No influence	0-4	9	9.9
	5	16	17.4
Strongly held	6-10	67	72.7

66 (71.7%) of the participants believed that spiritual forces helped them cope with daily life. 9(9.8%) did not feel they received any such help.

Table 4.5.9

Question 9. Belief that spiritual power or force enables one to *cope* personally with events in life		**Number**	**Percentage**
No help	0	9	9.8
	1	0	0
	2	3	3.3
	3	2	2.2
	4	2	2.2
	5	10	10.9
	6	3	3.3
	7	5	5.4
	8	1	1.1
	9	11	12.0
A great help	10	46	50.0
No influence	0-4	16	17.4
	5	10	10.9
Strongly held	6-10	66	71.7

The belief that spiritual forces influence world affairs was held by 51 (55.4%), while 27(29.3%) did not. 14 (15.2%) were in the middle of the 0 to 10 scale.

Table 4.5.10

Question 10. Belief that a spiritual power or force other than oneself influences world affairs, e.g., wars.		**Number**	**Percentage**
No influence	0	15	16.3
	1	2	2.2
	2	4	4.3
	3	1	1.1
	4	5	5.4
	5	14	15.2
	6	4	4.3
	7	6	6.5
	8	6	6.5
	9	5	5.4
Strong influence	10	30	32.6
No influence	0-4	27	29.3
	5	14	15.2
Strong influence	6-10	51	55.4

A considerable number of people (34.8%) did not believe that spiritual forces influence natural disasters in the world, while 51 (55.4%) felt that they did influence such events.

Table 4.5.11

Question 11. Belief that a spiritual power or force other than oneself influences natural disasters, like earthquakes, floods		**Number**	**Percentage**
No influence	0	19	20.7
	1	1	1.1
	2	1	1.1
	3	5	5.4
	4	6	6.5
	5	9	9.8
	6	6	6.5
	7	4	4.3
	8	6	6.5
	9	3	3.3
Strong influence	10	32	34.8
No influence	0-4	32	34.8
	5	9	9.8
Strong influence	6-10	51	55.4

65 (70.7%) of the participants said that they communicated with a spiritual power; the most common method was by prayer (92.3%).

Table 4.5.12.1

Question 12.a Communication in any way with a spiritual power, by prayer or contact via a medium	**Number**	**Percentage**
No	23	25
Yes	65	70.7
Unsure	4	4.3

Table 4.5.12.2

Question 12.b. Communication in any way with a spiritual power, by prayer or contact via a medium If yes, describe form of communication (multiple) *n*=65	**Number**	**Percentage**
Dreams	2	3.1
Prayer	60	92.3
Meditation	5	7.7
Praise, religious songs	2	3.1
Yoga	1	1.5

The majority of respondents (55.4%) were unsure about whether people exist in some form after death. Most of those who responded that there is existence after death, felt it would be in the form of spirit.

Table 4.5.13.1

Question 13.a Belief that people exist in some form after death	**Number**	**Percentage**
No	18	19.6
Yes	23	25.0
Unsure	51	55.4

Table 4.5.13.2

Question 13.b Belief that people exist in some form after death. If yes, describe (multiple) *n*=23	**Number**	**Percentage**
Back to dust	2	8.7
Don't know	4	17.4
Don't think about it	2	8.7
Spirit	10	43.5
Rebirth/reincarnation	5	21.7
In heaven	6	26.1
With God	3	13.0
Aatma	1	4.3
Angels	1	4.3
Depends on karma/punya	1	4.3
Because elders say so	1	4.3

15 (16.3%) reported having had experience an intense experience which gave them a new meaning in life. The frequency of such events ranged from 1 to 20 and the duration ranged from 1 to 120 minutes.

Table 4.5.14

Question 14. *Intense experience* (unrelated to drugs or alcohol) in which person felt some deep new meaning in life, felt at one with the world or universe.	**Number**	**Percentage**
No	77	83.7
Yes	15	16.3

Table 4.5.15

Question 15. *Intense experience* - If yes, how often (*n*=15)	**Number**	**Percentage**
1	4	4.3
2	1	1.1
3	1	1.1
5	3	3.3
7	1	1.1
10	3	3.3
15	1	1.1
20	1	1.1

Table 4.5.16

Question 16. I*ntense experience* – If yes, how long (in minutes)(*n*=15)	**Number**	**Percentage**
1	1	1.1
2	1	1.1
3	1	1.1
5	5	5.4
10	4	4.3
30	2	2.2
120	1	1.1

The table below has the verbatim descriptions of the intense spiritual/religious experience reported by participants.

Table 4.5.17

Question 17. I*ntense experience* – If yes, description (*n*=15)
1)At 18 yrs when I was sleeping, I woke up and saw *Renukambal* wearing *kumkum*, turmeric walking the streets at midnight. My faith became strong after this experience. It has saved me from several disasters. I firmly believe this
2) My body feels` *adirch*i'(tremor),and then the spirit comes and speaks within me. I am unaware when this happens.
3) An evil spirit tried to enter my home one night. A white form prevented it from entering.
4) *Gangamma* possessed me. I danced and spoke in tongues. That's when everyone knew that I had God's power. But before I could speak revelations, somebody roused me with water.
5) God came and told me in my dream that everything would be alright.
6) In my dreams *Perumalswamy* came and told me to do good and not to do wrong.
7) I see visions in my dreams. I am unable to express it in words.
8) I have seen God with my eyes closed during intense prayer to *Shivalingam*.
9) I speak in tongues.
10) I speak in tongues. I also see visions in dreams. I have predicted the future of others.
11) I have felt the spirit inside me, talking to me. I have derived strength from this.
12) When I pray God hears and answers me. I see Him stand in front of me, I can feel Him
13) While meditating at an ashram, I was crying. I felt a surge of energy.
14) It is impossible to describe.
15) While praying, without knowing, speech comes, correct words to be Sometimes/often. God uses me as an instrument to do the right thing. I have peace of mind after prayer.

5 (5.4%) of the participants reported having experienced a near death experience. All of them felt that this experience had changed their lives extremely.

Table 4.5.18

Question 18. Undergone intense experience at a time when one almost died but was eventually revived.	**Number**	**Percentage**
No	86	93.5
Yes	5	5.4

Table 4.5.19

Question 19. If yes, extent to which this near death experience changed one's life.	**Number**	**Percentage**
0 Not at all	0	0
1	0	0
2	0	0
3	0	0
4	0	0
5	0	0
6	0	0
7	0	0
8	0	0
9	0	0
10 Extremely	10	100

4.6 FACTORS ASSOCIATED WITH COPING METHODS

The seven different coping styles were reclassified on the basis of the characterization of the coping action focus (as emotion or problem based), based on the definitions originally reported by the JCS (56). Thus, the confrontive, evasive, supportative and self-reliant coping styles were classified as problem-focused coping while the emotive, palliative and

optimistic styles represented emotion-focused coping. This new division allowed for comparative analysis with the other variables. Using the Pearsons correlation coefficient and the t-test for continuous and categorical variables respectively, the following results were obtained:

1. Patient-***Demographic factors*** (Tables 4.6.1and 4.6.2):

No patient demographic factors were significantly associated with the relative's coping style.

2. Patient-***Clinical factors*** (Tables 4.7.1 and 4.7.2):

Problem focused coping methods were significantly more in relatives whose patients were on benzodiazepines in addition to antipsychotic medication(p=0.034).

Emotion or affect based coping methods were significantly associated with PANSS negative scores (p=.007), PANSS total scores (p=.042), a history of deliberate self harm attempts by the patient (p=.004) and violence by patient towards the relative (p=.049).

Table 4.6.1 Patient Factors associated with problem focused coping

Variable	Mean	SD	t /r	Degrees of freedom	*P* value
Gender Male Female	17.2 16.1	3.5 4.3	1.2	90	0.230
Age	34.2	9.8	-.021		.844
Years of education	10.6	4.3	.114		.281
Income per month	3451	12665.6	.117		.268
Duration of illness	67.5652	62.49155	.151		.151
Age onset illness	28.7826	9.18411	-.074		.484
Number of hospitalizations	.5652	.98677	.056		.598
PANSS positive score	12.4565	5.19597	-.017		.869
PANSS negative score	14.0761	6.06962	-.051		.631
PANSS general psychopathology score	25.2717	6.87263	-.057		.592
PANSS total score	51.7935	15.52066	-.011		.915
Violence to relative, no yes	16. 17.3	4.2 3.6	- 1.480	90	.142
ECT, no yes	16. 17.2	4.2 2.2	-.886	25.4	.384
Side effects , no yes	15.8 17.1	3.7 4.1	-1.43	90	.156
Deliberate self harm, no yes	16.4 17.0	4.2 3.4	-.721	90	.473
Substance abuse, no yes	16.6 16.3	40 4.2	.269	90	.788
Comorbidit, no yes	16.4 17.1	4.0 4.1	-.682	90	.497
Hindu, no yes	17.1 16.4	4.3 3.9	.651	90	.517
Muslim, no yes	16.6 16.1	4.1 3.8	.314	90	.754
Christian, no yes	16.4 17.9	3.9 4.7	1.120	90	.266
Marital status, single/divorced / widowed/married	17.1 16.1	3.7 4.3	1.173	90	.244
Medication, with benzodiazepines, no yes	16.2 19.1	3.9 3.9	2.157	90	.034*
Compliance, poor good	15.6 16.7	3.6 4.1	1.057	90	.293
Employment, no yes	17.1 16.3	3.6 4.2	.812	90	.419

Table 4.6.2: Patient factors associated with emotion based coping methods

Variable	Mean	SD	t /r	Degrees of freedom	*p* value
Gender Male	14.9	2.9	1.56	87	.135
Female	13.8	3.5			
Age	34.2	9.8	-.044		.681
Years of education	10.6	4.3	.181		.083
Income per month	3451	12665.6	.060		.570
Duration of illness	67.5652	62.49155	.022		.833
Age onset illness	28.7826	9.18411	-.031		.771
Number of hospitalizations	.5652	.98677	-.014		.894
PANSS positive score	12.4565	5.19597	.166		.113
PANSS negative score	14.0761	6.06962	.282		.007*
PANSS general psychopathology score	25.2717	6.87263	.107		.312
PANSS total score	51.7935	15.52066	.213		.042*
Violence to relative no	13.8	3.2	-	90	.049*
yes	15.2	3.5	1.998		
ECT, no	14.3	3.3	.231	90	.818
yes	14.0	3.6			
Side effects, no	14.6	3.3	.809	90	.421
yes	14.1	3.4			
Delberate self harm, no	13.6	3.4	-2.97	90	0.004*
yes	15.8	2.8			
Substance abuse, no	14.4	3.3	.960	90	.339
yes	13.5	3.7			
Comorbidity, no	14.4	3.4	.365	90	.716
yes	14.1	3.4			
Hindu, no	14.6	2.8	.524	90	.602
yes	14.2	3.4			
Muslim, no	14.4	3.4	.809	90	.421
yes	13.4	3.3			
Christian, no	14.1	3.4	1.411	90	.162
yes	15.7	1.9			
Marital status, single / divorced / widowed / married	14.8	3.3	1.573	90	.119
	13.7	3.4			
Medication with benzodiazepines,					
no	14.1	3.4	-	90	.231
yes	15.5	2.7	1.207		
Compliance, poor	13.3	3.8	-	90	.155
good	14.5	3.1	1.434		
Employment, nil	14.9	3.0	1.203	90	.232
yes	14.0	3.4			

3. Caregivers-*Demographic characteristics associated with coping methods* (Tables 4.7.1 and 4.7.2):

Problem based coping strategy scores were significantly higher in men as compared to women (p=.010). Scores were positively correlated with years of education (p=.004), and amount of debt (p=0.044). People with no employment and housewives had significantly lower scores than those employed (p=.000).

Emotion based coping strategies were positively correlated with years of education (p=.001). People with no employment and housewives had significantly lower scores than those employed (p=.046). People who qualified as a case of common mental disorder by the GHQ score had significantly lower scores (p=.036) as compared to those who were not a case.

Table 4.7.1: Caregiver demographic factors associated with problem based coping methods

Variable	Mean	S.D	t/r	Degree of freedom	*p* value
Age	45.0	13.3	-.011		.919
Gender Male Female	17.4 15.1	4.2 3.6	2.632	90	.010*
Relationship to patient Other Spouse/first degree relative	 18.6 16.4	 4.6 3.9	1.532	90	.129
Religion Hindu Other	17.1 16.4	4.3 3.9	.651	90	.517
Religion Muslim Other	16.6 16.1	4.1 3.8	.314	90	.754
Religion Christian Other	16.4 17.9	3.9 4.7	1.120	90	.266
Literacy Illiterate Read and write	16.2 16.5	3.6 4.1	-.293	90	.770
Years of schooling,	9.3	4.3	.296		.004*
Marital status Others Married	17.2 16.4	4.9 3.8	.808	90	.421
Housing Own Rented	16.3 17.4	3.9 4.1	-1.152	90	.252
Meals per day 2 3	14.5 16.6	7.7 3.9	-.727	90	.469
Number of people living in the house	4.3	2.1	.051		.191
Living with patient no yes	16.3 16.7	4.8 3.7	-.397	90	.692
Monthly family income, rupees	9646.7	13378.5	.181		.084
Debt, no yes	16.6 16.5	4.4 3.7	.163	90	3.7
Amount of debt	150490	290823	.012		.044*
Occupation, Housewife, nil Employed	 14.0 17.4	 3.2 3.9	-3.806	90	.000*
Physical illness, no yes	 16.5 16.7	 4.1 3.8	-.284	90	.777
Substance use no yes	16.4 17.4	4.0 4.1	-.793	90	.430
Perceived social support, Absent Present	15.9 16.8	4.1 3.9	-.921	90	.359
Case by GHQ no yes	 16.8 14.8	 3.9 4.4	1.867	90	.065

Table 4.7.2: Caregiver demographic factors associated with emotion based coping methods

Variable	Mean	S.D	t/r	Degree of freedom	*p* value
Age	45.0	13.3	-.097		.355
Gender Male Female	14.6 14.2	3.2 3.7	.237	90	0.813
Relationship to patient Other Spouse/first degree relative	 15.0 14.2	 2.5 3.4	.621	90	.536
Religion Hindu Other	14.6 14.2	2.8 3.4	.524	90	.602
Religion Muslim Other	14.4 13.4	3.4 3.3	.809	90	.421
Religion Christian Other	14.1 15.7	3.4 1.9	1.411	90	.162
Literacy Illiterate Read and write	12.9 14.4	3.4 3.3	-1.398	90	.166
Years of schooling	9.3	4.3	.329		.001*
Marital status others Married	14.2 14.3	4.1 3.2	-.215	90	.830
Housing Own Rented	14.1 14.7	3.4 3.1	-.805	90	.423
Meals per day 2 3	 10.0 14.4	 7.1 3.2	-1.853	90	.067
Number of people living in the house	4.3	2.1	.631		.068
Living with patient no yes	14.2 14.3	3.3 3.4	-.232	90	.817
Monthly family income, rupees	9646.7	13378.5	.065		.538
Debt, no yes	14.4 14.2	2.9 3.7	.271	90	.787
Amount of debt	150490	290823	.044		.680
Occupation, Housewife, nil Employed	 12.8 14.7	 4.2 2.9	-2.080	31.059	.046*
Physical illness no yes	14.4 14.1	3.5 2.9	.402	90	.688
Substance use no yes	14.3 14.2	3.3 3.9	.140	90	.889
Perceived social support Absent Present	13.5 14.6	3.9 3.1	-1.356	90	.178
Case by GHQ no yes	14.7 12.1	2.9 4.3	2.276	16.6	.036*

4. Caregivers - *Spiritual/religious characteristics associated with coping methods* (Tables 4.7.3 and 4.7.4):

Among caregivers, those who practiced meditation had a significantly higher score on emotion based coping strategies in comparison to those who did not (p=.026).

No other religious or spiritual factors were associated with coping strategies including professing a religious or spiritual belief system.

Table 4.7.3: Caregiver spiritual/religious factors associated with problem based coping methods

Variable	Mean	S.D	t/r	Degrees of freedom	*p* value
Spiritual/religious Neither Either/both	 17.0 16.5	 2.8 4.1	.157	90	.875
Strength of belief	8.3	2.4	-.032		.760
Prayer no yes	17.3333 16.5281	2.08167 4.08459	.339	90	.736
Ceremony no yes	16.9318 16.2083	4.00231 4.06834	.859	90	.393
Service no yes	16.3276 16.9412	3.94874 4.19914	-.703	90	.484
Meditation no yes	16.3 17.3	3.9 4.4	-1.055	90	.294
Study no yes	16.4 16.8	3.6 4.5	-.532	90	.596
Contact with religious leader no yes	 16.5 16.8	 3.9 4.4	-.280	90	.750
Importance of practice of belief	7.6	2.7	.060		.572
Influence of spiritual power in day to day life	7.9	2.8	.004		.969
Spiritual power enables coping	7.5	3.4	.001		.991
Spiritual power influences world affairs	6.1	3.7	-.102		.334
Spiritual power influences natural disasters	5.9	3.9	.078		.459
Near death experience no yes	 16.4 19.0	 4.0 4.2	-1.244	90	.217
Communication with spiritual power no yes	 15.9 16.8	 4.1 4.0	-.906	90	.367
Life after death no yes	 16.4 16.9	 3.9 4.6	-.431	90	.667
Intense religious experience no yes	 16.8 15.3	 3.5 3.9	.973	16.015	.345
No. of times	6.4	5.7	.404		.135
Duration	16.7	29.9	.125		.656

Table 4.7.4: Caregiver religious/spiritual factors associated with emotion based coping methods

Variable	Mean	S.D	t/r	Degrees of freedom	*p* value
Spiritual/religious Neither Either/both	 14.2 14.3	 2.8 3.4	-.124	90	.901
Strength of belief	8.3	2.4	.091		.387
Prayer no yes	14.3333 14.2921	2.08167 3.39854	.021	90	.983
Ceremony no yes	14.2727 14.3125	3.74392 2.99756	-.056	82.36	.956
Service no yes	14.1552 14.5294	3.60215 2.92570	-.514	90	.608
Meditation no yes	13.8 15.6	3.3 3.1	-2.260	90	.026*
Study no yes	13.8 14.9	3.5 3.1	-1.508	90	.135
Contact with religious leader no yes	 14.2 15.0	 3.4 3.0	-.818	90	.416
Importance of practice of belief	7.6	2.7	.160		.129
Influence of spiritual power in day to day life	7.9	2.8	-.016		.877
Spiritual power enables coping	7.5	3.4	.064		.543
Spiritual power influences world affairs	6.1	3.7	.069		.514
Spiritual power influences natural disasters	5.9	3.9	.212		.043*
Near death experience no yes	 14.2 16.8	 3.4 1.3	-1.507	90	.135
Communication with spiritual power no yes	 13.8 14.5	 3.4 3.3	-.949	90	.345
Life after death no yes	 14.1 14.9	 3.4 3.4	-.950	90	.345
Intense religious experience no yes	 14.3 14.5	 3.2 4.1	-.217	90	.828
No. of times	6.4	5.7	.164		.560
Duration	16.7	29.9	.085		.763

4.7 SUMMARY

92 patients and their carers were contacted and all (100 %) consented to the interview. Among the carers most were a parent (35.9 %) or spouse (34.8%). The majority were literate (89.1%), men (64.1%) and married (78.3%). The mean age was 45 years. The majority (80.4%) belonged to the Hindu faith. 15 (16.3) scored four or more on the GHQ qualifying for caseness.

Among the patients, the mean age was 34.3 years. The majority were married (52.2%), women (58.7%), belonged to the Hindu religion (80.4%), were housewives (45.7%), or unemployed (30.4%). The mean age of onset of illness was 28.8years and the mean duration of illness was 67.6 months. Mean total PANSS score was 51.8. 38% of the relatives reported to have been subject to violence from the patient. Most patients (87%) had not had ECT or attempted self harm at any time (71.7%).

Among the different coping strategies that carers reported they used in dealing with their ill relative, the most frequently used was the optimistic type while the least commonly used were the palliative and supportive methods. Of all the methods, 'Wished that the problem would go away' from the evasive, 'Hoped that things would get better' and 'Tried to think positively' from the optimistic, were the most popular methods used. 'Talked the problem over with someone who had been in a similar situation' was the least commonly employed strategy.

The method considered most useful was the optimistic while the emotive methods were considered least useful. 'Hoped that things would get better', 'Told yourself not to worry because everything would work out fine' and 'Tried to think positively' – from the optimistic methods -were considered the most useful while 'Worried about the problem'

and ‘Got mad and let off steam’ – from the emotive methods - were considered least useful.

Most people (97.8%) considered themselves as religious and/or spiritual while only 2 people reported being neither. 82.7% of the respondents held strongly to their religious views. The most common religious/spiritual activity was prayer (96.7%). The majority of the participants believed in the necessity of the practice of their religious/spiritual beliefs in day to day life, that spiritual powers influenced events and helped them cope with daily life. The belief that spiritual forces influenced world affairs or natural disasters was held by 55.4%. Most respondents (55.4%) were unsure about whether people exist in some form after death; of those who did, most felt it would be in the form of spirit. 15 carers reported having had an intense experience which gave them a new meaning in life while 5 reported having had a near death experience.

Reclassifying the coping strategies as emotion or problem based, factors associated with higher scores on the problem based methods included patients being on benzodiazepines (p=0.034), male carers (p=.010), more years of education in carer (p=.004), greater debt in carer(p=0.044) and carer being in employment (p=.000).Higher scores in emotion based coping methods were associated with higher PANSS negative (p=.007) and total scores (p=.042) in , history of deliberate self harm attempts by patient (p=.004) , violence by patient towards the relative (p=.049),more years of education in carer (p=.001), carer being in employment (p=.046) , absence of disorder in carer on the GHQ-12 (p=.036) and practice of meditation by the carer (p=.026).

5.1 INTRODUCTION

Informal caregivers play a significant role in the care of their mentally ill relatives. Recent years have seen an increase in the awareness of the burden these carers are faced with and their internal resources that come into play in this role. However, data from India is sparse. This study, conducted in a psychiatric hospital outpatient setting, attempted to study coping methods that are used by caregivers as well as the spiritual beliefs and views they may hold. This section discusses the methodological issues and the results.

5.2 METHODOLOGICAL CONSIDERATIONS

1) Translation During the translation of the screening instruments and interview schedule into Tamil, the translators took care to use language as spoken by the local people, to ensure that it would be appropriate to the study population. This would however mean that this particular version may not be applicable to people who speak other dialects of Tamil.

2) The sample size was sufficiently large to draw valid conclusions from the study.

3) Subjects All of the subjects contacted participated in the study, resulting in a 100% second stage response rate.

4) Setting The interview procedures were carried out in the privacy of a consultation room in the hospital. Despite the attempt to ensure privacy, in some cases the lack of it and the sensitive nature of the issues discussed could have influenced the results of the administered instruments.

5) Procedure Though the majority of the subjects were literate, to ensure uniformity, the instruments were not self-administered but were instead read out to them using the recommended procedure.

6) Instruments The Positive and Negative Symptom Scale (PANSS) was used to rate symptom severity in patients. Carer spirituality was assessed with the Royal Free Interview for Religious and Spiritual Beliefs, and coping with the Modified Jalowiec Coping Scale. These scales have been translated into Tamil and have been regularly used in this population. Common mental disorders were screened for using the General Health Questionnaire-12 which has been validated for use in this population.

5.3 COPING STRATEGIES IN CARERS OF PATIENTS WITH SCHIZOPHRENIA

Informal caregivers of patients with a chronic illness like schizophrenia are faced with many challenges every day of their life. These challenges include the management of financial resources, a disruption in different aspects of their own life and the stigma of, and emotional distress related to mental illness. The way each individual copes with these challenges is variable. Broadly, these coping strategies are described as having one of two primary functions - one focused on problem solving, and the second primarily focused on the emotional reactions to the problem. Traditionally problem-centered coping has been considered to be associated with better physical as well as mental health. Emotional, or avoidance, responses on the other hand, have been shown to be less effective and leading to greater distress.

The Jalowiec Scale used in this study has seven categories of coping methods listed which can be divided into problem-focused coping (confrontive, evasive, supportative and self-reliant) and emotion-focused coping (emotive, palliative and optimistic).

Overall, the most frequently used coping method reported by the participants in this study was the optimistic type, which is considered an emotional strategy. This was followed by two problem oriented methods - the evasive and confrontative methods. The least commonly used were the palliative and supportive methods - one from each group. Individually, the problem oriented response of 'Wished that the problem would go away' from the evasive group and emotional responses of 'Hoped that things would get better' and 'Tried to think positively' from the optimistic group were the most popular methods used.

Sharing and talking about the problem with someone who had been in a similar situation was the least commonly employed strategy. Possible explanations for this may be the lack of opportunity and availability of support groups in the community and the hospital; stigma related to mental illness may also deter caregivers from sharing information with others.

The method considered most useful was the optimistic while the emotive methods were considered least useful. 'Hoped that things would get better', 'Told yourself not to worry because everything would work out fine' and 'Tried to think positively' – from the optimistic methods-were considered the most useful while 'Worried about the problem' and 'Got mad and let off steam' – from the emotive methods-were considered least useful.

This study replicates findings of some earlier studies that mention socioeconomic and education factors as influencing coping methods - this study found that higher scores on both the problem and emotion based methods were associated with the caregiver having a greater level of education and gainful employment, suggesting that these factors provide a buffer and support against their stress. Higher scores on the problem based methods were also seen in those with greater amounts of debt.

Previous studies have reported that women tend to use more of emotion-focused approaches; this study found significantly higher scores on the problem oriented methods among men. While some studies have reported the age of the caregiver as influencing the nature of coping, this association was not seen in this study. A report from Indian literature has found poorer coping among family members of male patients, however this was not found in the present study.

Earlier studies have reported a link between active psychotic symptoms and coping strategies. In this study, higher scores in emotion based coping methods were associated with higher scores on PANSS, in the negative and total scores. This is in keeping with earlier research which has found that emotion based strategies such as avoidance and resignation are often employed when the problem is protracted and considered unchangeable, which is often the case with negative symptoms.

Other factors that reflect greater psychopathology in the patient, such as a history of deliberate self harm and violence towards the relative, were also associated with higher emotion scores. Given the critical, distressing and often unexpected nature of these two events, it is understandable that it elicits an emotive response. The use of additional benzodiazepines in the patient, again reflective of a greater degree of disturbance or

psychopatholgy, was associated with higher scores on the problem based coping strategies. While some studies have reported a correlation between duration of patient's illness and relative's coping, this was not found in the present study.

Relatives who were found to have a common mental disorder by GHQ-12 were found to have significantly lower scores on emotion based coping methods as compared to those who did not have a disorder; this is similar to other studies that have shown a greater level of emotion based coping in people with psychopathology.

5. 4 RELIGION AND SPIRITUALITY IN CAREGIVERS OF PATIENTS WITH SCHIZOPHRENIA

Over the past few years the importance of the role of spirituality and religion in the lives of people with mental illness has been recognized, and there is a move to consider management on the lines of a bio-psycho-socio-religious model for patients who are so inclined. Compared to secular methods of coping, religion and spirituality have been found to offer solace to many who face problems. Studies have reported that patients with schizophrenia, in the residual phase, who have a strong spiritual, religious, or personal belief system, tend to have more adaptive coping skills. It has been demonstrated that spirituality and religiousness can influence factors such as patient symptoms, social functioning, substance use, as well as adherence to treatment.

Similarly, relatives of patients with schizophrenia are faced with the significant and chronic burden of caring for a family member with distressing and disabling difficulties. Religion and spirituality may serve as a source of support for such individuals.

This study found that most individuals identified themselves as religious and / or spiritual and held strongly to their religious views. This finding is in keeping with traditional Indian culture.

Verbatim reports from caregivers showed that a large number of individuals believed in all Gods regardless of their professed religion. This may be a reflection of the tolerant attitude that is characteristic of our culture; it may also indicate that persons who are faced with significant difficulties in life are willing to take help from all and any available source in order to obtain some relief. While religious beliefs were widely held and mostly perceived as a solution to problems, there was also acknowledgment that desired responses are not always obtained despite prayer or other religious activity as demonstrated in the statement, 'Sometimes I get answers from God, sometimes not'. There are also those who reported having lost their faith as a result of the issues surrounding their relative's mental illness. A few appeared to have more collaborative and self directing views as they believed that they had to either share responsibility for coping with God or take on complete personal responsibility to solve their problems.

While most caregivers – above 70% - believed that their religious activity influenced events in their life and helped them cope with daily life, it was interesting to note that a smaller number believed that spiritual forces influenced world affairs or natural disasters, suggesting that attributions of negative events to spiritual forces was less as compared to positive. Most respondents (55.4%) were unsure about whether people exist in some form after death; of those who did, most felt it would be in the form of spirit. Unusual occurrences such as having had an intense religious experience or a near death experience were reported in a small group, as would be in the general population.

The practice of meditation, a popular and widely accepted coping and relaxation strategy in India, was the only religious/spiritual factor found to be associated with higher scores on the emotion based coping method. This suggests that this culturally prevalent practice can be recommended as an effective tool to cope with the stress of daily life.

5. 5 IMPORTANCE OF COPING AND SPIRITUALITY IN CAREGIVERS OF PATIENTS WITH SCHIZOPHRENIA

1. Burden is significant in caregivers of patients with schizophrenia, which is often a chronic and disabling illness.
2. Strategies that individuals use to cope with this burden are varied and influenced by several factors including patient related factors, carer attitudes, beliefs, support systems and available resources.
3. Positive and beneficial coping strategies should be discussed with caregivers of patients with mental illness.
4. Spirituality and religion can serve as a positive coping strategy in caregivers of patients with schizophrenia.
5. Clinicians must be aware of common religious views existing in the culture of those they provide care to.
6. The biopsychosocial management package can be enhanced by incorporating an acceptable religious/spiritual component for patients and caregivers who are so inclined.
7. When dealing with the sensitive topic of religion, physicians must be non-judgmental, culturally sensitive, and provide opportunity for caregivers to discuss their concerns. Asking open-ended questions is a useful strategy (e.g. “What do you

feel is the role of religion /spirituality in your life?"). Providing privacy can encourage discussion.

8. Providing support to the caregivers of the chronically mentally ill is an essential part of good clinical care.

5. 6 STRENGTHS AND LIMITATIONS OF THE STUDY

Limitations of the study

1. Given its cross-sectional design,data collection was carried out during a single interview. Longitudinal studies are needed to examine the possible fluctuations and changes in the nature of coping strategies and religious views in carers of patients with schizophrenia.
2. Given the sensitive nature of the topic under study, some respondents may have been reluctant to discuss their true beliefs, attitudes and concerns.
3. A single interviewer carried out all the assessments and no attempt was made at blinding.
4. The study has a cross-sectional design and does not allow one to make inferences on the direction of causality and the precise nature of association between the variables.

Strengths of the study

1. The study included a heterogenous population in terms of age, socioeconomic status, education etc.
2. The participants were selected in a consecutive manner to avoid selection bias during recruitment.

3. A single interviewer who was aware of the social and cultural backgrounds of the participants and was well versed in the local language conducted the interview.This ensured that there was no significant reporting bias.

5. 7 RECOMMENDATIONS AND FUTURE DIRECTIONS FOR RESEARCH

Time and effort devoted by clinicians towards the support of the relatives of patients with schizophrenia is minimal. The importance of this essential service is often unrecognized.and the role it has in influencing patient outcome is largely ignored. Professionals frequently have prejudiced beliefs about the role of religion in psychiatric practise and therefore avoid the topic.

Future reasearch goals should focus on :

- ✓ Refining understanding of carers coping strategies and relgious beliefs in relation to cultural diversity.
- ✓ Developing management strategies which incorporate these elements and can be applied in routine psychiatric practice.
- ✓ Develop widely available,easily accessible and adequate support services for carers of patients with mental illness.

1. A variety of coping strategies are used by caregivers of patients with schizophrenia.
2. The most *frequently* used method was the optimistic type while the least commonly used were the palliative and supportative methods.
3. The method considered most *useful* was the optimistic while the emotive methods were considered least useful.
4. Factors significantly associated with coping methods included caregiver's gender, years of education, employment, financial debt, and psychopathology as well as patient's symptoms and psychopathology.
5. Most people reported having strong religious beliefs which they felt influenced their life and coping.
6. This study has examined a little-studied topic, has provided information on caregiver coping and spirituality, and raises issues to be addressed in future studies.

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CONSENT FORM

Informed Consent form to participate in a research study

Study Title: Spirituality and coping among relatives of patients with schizophrenia

Study Number: _____

Subject's Initials:_____

Subject's Name: _____

Date of Birth / Age: _____

(i) I confirm that I have read and understood the information sheet dated _____ for the above study and have had the opportunity to ask questions.

(ii) I understand that my participation in the study is voluntary and that I am free to withdraw at any time, without giving any reason, without my medical care or legal rights being affected.

(iii) I understand that the Sponsor of the clinical trial, others working on the Sponsor's behalf, the Ethics Committee and the regulatory authorities will not need my permission to look at my health records both in respect of the current study and any further research that may be conducted in relation to it, even if I withdraw from the trial. I agree to this access. However, I understand that my identity will not be revealed in any information released to third parties or published.

(iv) I agree not to restrict the use of any data or results that arise from this study provided such a use is only for scientific purpose(s).

(v) I agree to take part in the above study.

Signature (or Thumb impression) of the Subject/Legally Acceptable

Date: _____/_____/_____

Signatory's Name: _____ Signature:

Or

Representative: _____

Date: _____/_____/_____

Signatory's Name: _____

Signature of the Investigator: _____

Date: _____/_____/_____

Study Investigator's Name: _____

Signature of the Witness: _____

Date: _____/_____/_____

Name & Address of the Witness: _____

Title of study:

Spirituality and coping among relatives of patients with schizophrenia.

Institution:

Christian Medical College, Vellore

Nature and purpose of the study:

You are invited to take part in a study that attempts to determine your ideas, views and perspectives on coping as a carer of a person with mental illness.

Procedure to be followed:

A doctor from the Department of Psychiatry will conduct this study. She will collect information regarding your views on spirituality and coping by administering some standard instruments. Related information will also be collected from your relative's medical records.

Expected duration of involvement:

The assessment will be done in one session that will last about half an hour.

Possible benefits of the study:

The information we obtain will help us better understand how you cope with the challenges you encounter while providing care for your relative with mental illness. This can in turn benefit others in a similar situation.

Confidentiality:

The records and details obtained in this study will remain confidential at all times. Your personal data will be collected and processed only for research purposes. You will not be referred to by name or identified in any report or publication.

Right to withdraw from the study:

You are free to leave the study at any time. Your decision to/ not to participate in this study will not affect your or your relative's future medical or psychiatric care in our hospital. For further queries you may contact:

Dr. Abigail Gojer

Department of Psychiatry, Christian Medical College, Vellore 632002

Phone: 0416 228 4516,email: psych1@cmcvellore.ac.in

xgGjy gbtk

Matpd jiygG:
kdrrpijT NehAwwthfspd cwtpdhpilNa fhzggLk
Mdkfj JtKk rkhspgGj jd ikAk.

epiyak:
fpUj Jt kUj Jtf fyY}hp NtY}h.

Matpd Nehffk:
,ej MaT kdrrpijT NehAwNwhiu ftdpj Jfnfhsgth,
jqfsJ rkhspgGj jd ikia gwwpa vz zqfs kwWk
Nehffqfisg gwwpajhFk. jhqfs ,ej Matpy gqNfwFkgb
NflLfnfhsfpNwhk

gpdgww ,UfFk nray Kiw:
kdNeha kUj Jtg gphtpypUeJ xU kUj Jth ,ej Matpid
Nkwnfhsthh. mth Mdkfj JtKk rkhspgGj jd ikAk gwwpa
jqfsJ Nehffqfs gwwpa tptuqfis rpy Nfstprrhjdqfs
%yk
Nflghh. ,ijrhhej jftyfs jqfsJ cwtpdhpd kUj Jt
Fwpgg Lfspypue Jk Nrfhpffggk.

vjphghhffggLk gqNfwG fhyk:
,ej Matpd Neh Kf fye Jiuahly xU Kiw nraaggLk.
Rkhh miukzp Neuk tiuebfFk.

,ej Matpd %yk VwgLk edikfs:
vqfSfF ,ej Matpd %yk fpilfFk jftyfspdhy
kdNehAww jqfsJ cwtpdiu ftdpj Jfnfhs stjpy VwgLk
fbdqfis jhqfs vt thW rkhspffpwhfs vdgij vqfshy
Ghpe Jnfhs s Kbk. ,J ,ej #oepiyapy cs s kwwthfSfFk
cjtpahf ,Uffk.

,ufrpafhgG:
,ej Matpd Mtdqfs kwWk ,ej Matpy ngwggLk
jftyfs midj Jk kpfTk ,ufrpakhf itffggLk. jqfspd
jdpggl l jftyfs ,ej Matpwfhf kl LNk gadgLj jggLk.
jqfspd ngah kwWk milahsk vejtpj ntspalbYk
njhpagLjjkhl lhJ.

Ma;tpyPUeJ tpyfpfnfhs;tjwfhd chpik:
,ej Ma;tpyPUeJ tpyfpfnfhs;tjwF vej NeuKk; jqfSfF
KO Rjejpuk; cz;L. jhq;fs; ,ej Ma;tpy; gq;Nfwgjw;Fk;
myyJ kWgG njhptpggjw;Fk; vLf;Fk; KbT ,ej
kUj;Jtkidapy; Nkw;nfhz;L njhlhe;J kUj;Jt myyJ
kdNeha; rpfpr;ir ngWtij vej tifapYk; ghjpf;fhJ.
NkYk; VNjDk; re;Njfq;fSf;F fofz;l Kfthpapid
njhlhGnfhs;Sq;fs;.

lhf;lh; : mgpnfay; Nfh[h;
kdey kUj;Jtgg;ghpT
fpUj;Jt kUj;Jtf; fy;Y}hp
Nt;Y}h; - 632 002.
Njhiyg;Ngrp vz;: 0416 - 2284516
,nkapy; : psych1@cmcvellore.ac.in

xg;Gjy; gbtk;

Ma;tpy; gq;Nfwgjw;fhd xg;Gjy;:

Ma;tpd; jiyg;G:

kdr;rpijT Neha;AwNwhhpd; cwtpdh;ilNa fhzggLk;

Mdkfj;JtKk; rkhsp;gGj;jdikia Fwpj;J fz;lwpjy;.

Ma;T vz;: _____

fye;J nfhs;gthpd; Kjw;ngah;: _____

fye;J nfhs;gthpd; ngah;: _____

gpwe;J ehs; / taJ: _____

fye;J nfhs;gth;

i). ehd; cWjp nra;tJ vd;ntd;why; _____

Njjpa;d; elf;ff ;Uf;fk; Ma;T Fwpj;J jfty; jhis Koikahf gbj;J Ghpe;J nfhz;Nld; ,ijggwwp Nfstp Nfl;fTk; thag;G fpilj;jJ.

ii). ehd; Ghpe;J nfhz;lJ vd;dntd;why; ,ehdhf Kd;te;J ,ej Ma;tpy; fye;J nfhs;fpNwd; vd;Wk;, ehd; vg;nghOJ Ntz;Lkhdhy;k;, fhuzk; ,dwp ,ej Ma;tpy; ,Ue;J tpyf;fpfnfhs;syhk; vd;Wk; ,jdhy;, vd;Dila itj;jpaNkh rl;l chpikNah ghjpf;fg;glhJ vd;gij mwpNtd;.

iii). ehd; Ghpe;J nfhz;lJ vd;dntd;why; kUj;Jt ghpNrhjidf;F gz;cjT nra;gthfs; myyJ mthfF gjpyhf gz;cjT nra;gthfs; ed;dljij FO, fl;Lgg;ghl;L mjpfhhpfs; MfpNahUf;F vd;Dila clyeyk;, kdeyk; gwwpa kUj;Jtf; Fwpg;Gfisg; ghh;gg;jw;F vd;Dila mDkjp Njitapy;iy vd;gJk; ehd; Ma;tpy; ,Ue;J tpyf;fpfnfhz;lhYk; ,g;nghOJNjh myyJ vjphfhyj;jpNyh, vd;Dila mDkjp Njitapy;iy vd;gij mwpNtd;. vd;Dila kUj;Jtf; Fwpg;Gfisg; ghh;gg;jw;F xj;Jf;nfhs;fpNwd; vd;Dila ngah; kwWk; Kfthp %d;whtJ kdpjhfS;F njhpa;gg;Lj;jg;glkhl;lhJ vd;gij mwpNtd;.

iv). ,ej Ma;tpy; %yk; njhptUk; KbTfs; mwptpay; Nehf;fj;jpwfhf gad;gLj;jg;gLtij ehd; xj;Jf;nfhs;fpNwd;.

v). ehd; ,ej Ma;tpy; xj;Jf;nfhs;s rkkjpf;fpNwd;

gq;Fnfhs;gthpd; ifnag;gk;: _____

Njjp:

gq;Fnfhs;gthpd; ngah;: _____

gpujpepjp: _____

Njjp: _____

ngah;: _____

Mathshpd; ifnaggk;: _____

Njjp:

Mathshpd; ngah;: _____

Njjp: _____

rhl;rpapd; ngah;: _____ ____

kwWk; Kfthp : _____

POSITIVE AND NEGATIVE SYNDROME SCALE (PANSS)

	Key	Absent (1)	Minimal (2)	Mild (3)	Moderate (4)	Moderate Severe(5)	Severe (6)	Extreme (7)
P1	Delusions							
P2	Conceptual disorganisation							
P3	Hallucinatory behaviour							
P4	Excitement							
P5	Grandiosity							
P6	Suspiciousness/persecution							
P7	Hostility							
N1	Blunted affect							
N2	Emotional withdrawal							
N3	Poor rapport							
N4	Passive/							
	apathetic social withdrawal							
N5	Difficulty in abstract thinking							
N6	Lack of spontaneity &							
	flow of conversation							
N7	Stereotyped thinking							
G1	Somatic concern							
G2	Anxiety							
G3	Guilt feelings							
G4	Tension							
G5	Mannerisms & posturing							
G6	Depression							
G7	Motor retardation							
G8	Uncooperativeness							
G9	Unusual thought content							
G10	Disorientation							
G11	Poor attention							
G12	Lack of judgement & insight							
G13	Disturbance of volition							
G14	Poor impulse control							
G15	Preoccupation							
G16	Active social avoidance							

THE ROYAL FREE INTERVIEW FOR SPIRITUAL AND RELIGIOUS BELIEFS

This interview concerns your beliefs and views about life.

We are now going to ask you some questions about religious and spiritual beliefs. Please try to answer then even if you have little interest in religion.

In using the word *religion,* we mean the actual practice of faith, e.g., going to a temple, mosque, church or synagogue. Some people do not follow a specific religion but do have *spiritual* beliefs or experiences. For example, they may believe that there is some power or force other than themselves that might influence their life. Some people think this as God or gods, others do not. Some people make sense of their lives without any religion or spiritual belief.

1. Therefore, would you say that you have a *religious* or *spiritual* understanding of your life? (Please tick one or more)

   ☐ Religious ☐ Religious and Spiritual

   ☐ Spiritual ☐ Neither religious nor spiritual

If you have NEVER had a RELIGIOUS or SPIRITUAL BELIEF, please go to question 13. Otherwise, PLEASE TRY TO ANSWER THE FOLLOWING QUESTIONS:

2. Can you explain briefly what form your religious / spiritual belief has taken?

3. Some people hold strongly to their views and others do not. How strongly do you hold to your religious / spiritual view of life? Circle the number that best describes your view

Weakly 0 1 2 3 4 5 6 7 8 9 10 Strongly

held view _____ held view

4. Do you have specific religion?

   ☐ I do not observe a religion (go to question 8) ☐ Roman Catholic ☐ Protestant

   ☐ Evangelical Christian ☐ Other Christian ☐ Shi'ite Moslem ☐ Sunni Moslem ☐ Jew ☐ Hindu ☐ Sikh ☐Jain ☐ Buddhist ☐ Other

5. Can you give more detail? (e.g., denomination, sect)

6. Do any of the following play a part in your belief? For example, you might pray or meditate alone or with other people. (Tick as many choices as apply to you).

Prayer	☐ Alone	☐ With other people
Ceremony (e.g., washing before prayer)	☐ Alone	☐ With other people

A religious service

Meditation ☐ Alone ☐ With other people

Reading and study ☐ Alone ☐ With other people

Contact with religious leader ☐ Alone ☐ With other people

None of the above ☐

7. How important to you is the practice of your belief (e.g., private meditation, religious services) in your day-to-day life? Please circle the number on the scale which best describes your view.

Not 0 1 2 3 4 5 6 7 8 9 10 Essential necessary _____

You can explain further if you would like to:

8. Do you believe in spiritual power or force other than yourself that can *influence* what happens to your in our day-do-day life? Please circle the number on the scale which best describes your view.

No 0 1 2 3 4 5 6 7 8 9 10 Strong influence _____ **influence**

9. Do you believe in a spiritual power or force other than yourself that enables you to *cope* personally with events in your life? Please circle the number on the scale which best describes your view.

No 0 1 2 3 4 5 6 7 8 9 10 A great help _____**help**

10. Do you believe in a spiritual power or force other than yourself that influence world affairs, e.g., wars? Please circle the number on the scale which best describes your view.

No 0 1 2 3 4 5 6 7 8 9 10 Strong influence _____ **influence**

11. Do you believe in a spiritual power or force other than yourself that influences natural disasters, like earthquakes, floods? Please circle the number on the scale which best describes your view.

No 0 1 2 3 4 5 6 7 8 9 10 Strong

influence _____ influence

12. Do you communicate in any way with a spiritual power, for example by prayer or contact via a medium?

    Yes / No / Unsure If yes, describe form of communication

    _____

13. Do you think that we exist in some form after our death?

    Yes / No / Unsure If yes, describe form of communication

    _____

14. Have you ever had an *intense experience* (unrelated to drugs or alcohol) in which you felt some deep new meaning in life, felt at one with the world or universe? (If you believe in God it may have felt like an experience of God). It might have been for a few moments, hours or even days.

    Yes / No / Unsure

If you answered NO to this question, go on to question 18. If Yes or unsure, please continue :

15. If yes, how often has this happen to you? _____

16. How long did the experience last (or usually last)? Days…..hours…..min….sec…

17. Can you describe it?

18. Some people have described intense experiences at a time when they almost died but were eventually revived. Has this ever happened to you?

    Yes / No / Unsure If yes or unsure, please describe the experience

19. If YES or UNSURE, how much has this near death experience changed your life? Please circle the number on the scale which best describes your view.

Not0 1 2 3 4 5 6 7 8 9 10

at all _____ Extremely

uhay; ghd; kjk; kwWk; Mdkfk; Fwj;j Nehfhzy;

cqfspLk; ehqfs; jqfsJ kjk; kwWk; Mdkfk; rkgejggl;l ekgpf;iffisf; Fwj;J ry; Nfstpfisf; Nfl;fg;Nghfpwhk; cqfSf;F kjj;jpy; Fiwej msT ekgpf;ifNa ,Ugg;Dk; jaT nra;J ,ej Nfstpfsf;F

tpilaspf;f Kawrp nra;aTk;.

kjk; vdfpw thhj;ijiag; gadgLj;JkNghJ, ehqfs; tpRthrj;jpd; eilKiw nray;ghLfisf; Fwpg;gpLfpNwhk; cjhuzkhf Nfhapy; k#jp kwWk; Njthyaqfspf;Fr; nry;Yjy; ry; eghfs; vej Fwpg;gpl;l kjj;ijAk; gpd;gwwkhl;lhfs; Mdhy; Mdkf ekgpf;fifisAk; mDgtqfisAk; nfhzbUgghhfs; cjuzkhf jqfisj; jtpj;J NtW rfjp jqfs; thof;ifiaf;

fl;LgglLj;Jtjhf mthfs; ekgyhk; ry; eghfs; mjid flTs; my;yJ Njthfshf epidf;fyhk; NtWrpyh; mtthW epidfhkYk; ,Uf;fyhk; ry; eghfs; vej kj my;yJ Mdkf ekgpf;ifAk; ,y;yhky; jqfs; thof;iffis mhj;jggLj;jpf; nfhs;syhk;.

1. vdNt eqfs; cqfSf;F cqfs; thof;ifia Fwj;j kj my;yJ Mdkf mbggilapyhd Ghpe;Jnfhs;Sjy; ,Ugg;jhf $Wthfsh?

a. kjk;

b. Mdkfk;

c. kjk; kwWk; Mdkfk;

d. kjk; kwWk; Mdkfk; my;y (jaT nra;J xdW my;yJ mjwF Nkwgl;l tww;y; Fwpa;lTk;.

cqfSf;F kjk; my;yJ Mdkf ekgpf;if vgNghJk; ,y;iynad;y; jaT nra;J Nfstp vz;13 f;F nry;ytk; ,y;yhtpl;lhy; gpd;tUk; Nfstpfsf;F gjpyspf;f Kawrp nra;aTk;.

2. cqfs; kjk;/ Mdkf ekgpf;if vej tbtj;ij Nkw;nfhz;Lsj;sJ vd cqfshy; RUf;fkhf vLj;Jiuff; KbAkh?.

3. ry; eghfs; jqfs; fUj;Jf;fis kpf cWjpahf nfhz;bUgghhfs; kwWk; rpyh; mtthW my;y. eqfs; cqfs; kj Mdkpf thof;iff; fUj;Jf;fis vt;tsT cWjpahf gww;f; nfhz;Ls;shfs? cqfs; fUj;ij rpwgghf tpthpf;Fk; vz;izr; Rww; tl;lkplTk;.

CWjpaww; cWjpNahL

gww;f;nfhz;L 0 1 2 3 4 5 6 7 8 9 10 gww;f;nfhz;L

cs;s fUj;J _____ cs;s fUj;J

4. cqfSf;F Fwpg;gpl;l kjk; ,Uf;fwjh?

a. vdf;F kjk; ,y;iy (Nfstp vz;8 f;Fr; nry;yTk;)

b. Nuhkd; fjNjhypf;fh **c.** rhr; M/g; rTj; ,z;bah

d. kww GNuhl lh] ld fs **e.** , thQry ffy fw] j th fs
f. kww fw] J th fs **g.** \ l Nlh K] yk
h. rd d K] yk **i.** Ajh
j. , eJ **k.** i [dkjk
l. r f fah **m.** Gj j kjk
n. kw i t

5. NkYk t tuq f is cq fshy juKbAkh? (cjhuz k ,gFj kwWk g hT)

6. g d tUg tww y VNjDk cq fs ekg f i fa y xU gqF t f f wjh?
cjhuz khf eq fs jd ahfNth my yJ kwwtUlNdh guhhj j f fyhk
my yJ j ahd f fyhk. (vj j id gj y fs cq fS f F nghUej tUNkh
mj j ida Yk Fwa lTk.)
guhhj j id jd ahf kwwtUld
a. to ghL (cjhuz k guhj j idf F jd ahf kwwtUld
Kd fOTjy) kj hahd to ghL
b. j ahdk jd ahf kwwtUld
c. thr j jy kwWk fwwy jd ahf kwwtUld
d kj j iytUld njhlhG jd ahf kwwtUld
e. Nkw Fwggl l vJTk , y iy jd ahf kwwtUld

7. cq fs ekg f i fiar nray gLj JtJ (cjhuz khf, j ahdk, kj
to ghLfs cq fs md whl tho f i fa y cq fS f F vej msT Kf fak?
cq fs fUj i j r wgg hf t th f Fk v z i z r Rww tl lk Tk.
m tr ak 0 1 2 3 4 5 6 7 8 9 10 mj j ah tr ak
eq fs t Ukg dhy NkYk t th f fyhk.

8. cq f i sj j t hj J xh rf j cq fs md whl tho t y elggtw iw
khww ai kj j jhf eq fs ekGf wh fsh? cq fs fUj i jr r wgg hf
t th f Fk v z i z r Rww tl lk lTk.
khww ai kf f 0 1 2 3 4 5 6 7 8 9 10 cWj ah f t y i y
_____ khww ai kf f wJ.

9. cq f i sj j t hj J xh M d k f rf j cq fs tho f f i a y ei lngWk
rkg t q f i s rkhs f f cq f i sg gf f t gg Lj J t jhf ekGf wh fsh? cq fs
fUj i jr r wgg hf t th f Fk v z i z r Rww tl lk lTk.
cj t 0 1 2 3 4 5 6 7 8 9 10 NgusT cj t , y i y

10. cq f i sj j t hj J Xh M d k f rf j cyf elgGf i s khww ai kgg jhf
(cjhuz k: Nghh) ekGf wh fsh? cq fs fUj i jr r wgg hf t th f Fk
v z i z r Rww tl lk lTk.
khww ai kf f 0 1 2 3 4 5 6 7 8 9 10 cWj ah f t y i y
_____ khww ai kf f wJ.

11. cq f i sj j t hj J Xh M d k f rf j , aw i f Nguo Tf i s cjhuz khf e y
eL f fk n t s sk khww ai kgg jhf ekGf wh fsh? cq fs fUj i jr r wgg hf
t th f Fk v z i z r Rww tl lk lTk.

khwwpa i k f f 0 1 2 3 4 5 6 7 8 9 10 cWjpahf tpy i y

_____ khwwpa i k f fpwJ.

12. epq f s Xh M d k f rf jpA l d ve j tpj j jpyht J njhlhG nfhs tJ z lh? cjhuz khf gpuhhj j i d myyJ C l f j jpd %yk njhlhG nfhs S j y

M khk / , y i y / njhpa tpy i y.

M khk vdpy, njhlhG nfhs S k K i w gwwp tpthpf fTk.

13. kuz j jpwf gpd NtW Vjht J t b t j jpy ehk , UgNghk vdw epq f s epi d f fwhf s h?

M khk / , y i y / njhpa tpy i y.

M khk vdpy , mej t b t j i j tpthpf fTk.

14. , ej cyfk myyJ gpugQrj Jld xdwhf , Uggjhf c z hjy cq f s thof i fapy M oej gjpa mhj j j i j c z hjy Nghdw c d dj mDgtq f s cq f S f F Vwgl l J z lh (kJ kwWk Nghi j g nghUl f spd njhhgpdwp)? cq f S f F f l Ts ekgpf i f , Uejhy , mJ f l Tspd mDgtk Nghd W c z ugg l bUf fyhk. mJ rpwpJ NeukhfNth, kz pfshfNth myyJ ehl fshfNth $l , Uejpf fyhk.

M khk / , y i y / njhptpy i y

epq f s , ej Nfs tpf F , y i y vd tpi l aspj J , Uejhy Nfs tp vz 18f Fr nry y t k M khk myyJ njhpa tpy i y vdpy , jaT nra J njhluTk.

15. M khk vdpy vt tsT mbf fb mJ cq f S f F Vwgl l s sJ.

16. vt tsT Neuk mej mDgtk ebj j J? (myyJ nghJ thf ebf Fk)

ehs .....k z p .....epkpl k ..... tpdhb .....

17. mj i d cq f shy tpthpf f KbAkh?

18. rpy eghf s jhq f s xU rkaj jpy Vwf F i wa kuz k m i leJ f i l rpapy gpioj jhd c d dj mDgtq f i s tpthpj J c s shh f s cq f S f F mt thW el eJ s s jh?

M khk / , y i y / nj spthf , y i y

19. M khk myyJ nj spthf , y i y vdpy , mej mDgtj i j jaT nra J tpthpf fTk. M khk myyJ nj spthf , y i y vdpy mj j i fa kuz j i j neUq Fk mDgtk cq f s tho i t vej msT khwwpa i k j Js sJ? cq f s fUj i j r rpwgghf tpthpf Fk v z i z r Rwwp t l lkpl Tk. Kwwpyk , y i y 0 1 2 3 4 5 6 7 8 9 10 mj j khf , ej Nehfh z ypy gq F ngwwJ f fhf cq f S f F kpf Tk edwp !

MODIFIED JALOWEIC COPING SCALE

COPING METHODS	How often have you used each coping method?				If you have used that coping method, how helpful was it?			
	Never	Seldom	Some	Often	Never	Seldom	Some	Often
1.Thought out different ways to handle the situation	0	1	2	3	0	1	2	3
2.Tried to look at the problem objectively and see all sides	0	1	2	3	0	1	2	3
3.Tried to keep the situation under control	0	1	2	3	0	1	2	3
4.Tried to handle things one step at a time	0	1	2	3	0	1	2	3
5.Tried to put the problem out of your mind and think of something else	0	1	2	3	0	1	2	3
6.Wished that the problem would go away	0	1	2	3	0	1	2	3
7.Hoped that things would get better	0	1	2	3	0	1	2	3
8.Told yourself not to worry because everything would work out fine	0	1	2	3	0	1	2	3

9.Tried to keep a sense of humor	0	1	2	3	0	1	2	3
10.Thought about the good things in your life	0	1	2	3	0	1	2	3
11.Tried to think positively	0	1	2	3	0	1	2	3
12.Tried to see the good side of the situation	0	1	2	3	0	1	2	3
13.Worried about the problem	0	1	2	3	0	1	2	3
14.Got mad and let off steam	0	1	2	3	0	1	2	3
15.Tried to distract yourself by doing something that you enjoy	0	1	2	3	0	1	2	3
16.Tried to keep busy	0	1	2	3	0	1	2	3
17.Talked the problem over with family or friends	0	1	2	3	0	1	2	3
18.Talked the problem over with someone who had been in a similar situation	0	1	2	3	0	1	2	3
19.Kept your feelings to yourself	0	1	2	3	0	1	2	3
20.Wanted to be alone to think things out	0	1	2	3	0	1	2	3

21.Tried to keep your feelings under control	0	1	2	3	0	1	2	3
22.Preferred to work things out yourself	0	1	2	3	0	1	2	3

மாற்றி அமைக்கப்பட்ட ஜாலோவியைக் சமாளிக்கும் அளவுக்கோல்

வ எண்.	மாற்றி அமைக்கப்பட்ட ஜாலோவியைக் சமாளிக்கும் அளவுக்கோல்	ஒவ்வொரு சமாளிக்கும் முறையையும் எவ்வளவு அடிக்கடி பயன்படுத்தி இருக்கிறீர்கள்				நீங்கள் அந்த சமாளிக்கும் முறையை பயன்படுத்தி இருந்தால் எவ்வளவு உபயோகமாக இருக்கிறது?			
		ஒருபோதும் இல்லை	அரிதாக	சில சமயங்களில்	பலமுறை	ஒருபோதும் இல்லை	அரிதாக	சில சமயங்களில்	பலமுறை
1.	சூழ்நிலையைக் கையாள வெவ்வேறு வழிகளையோசித்தேன்								
2.	சிந்தித்து பிரச்சனையை அதன் எல்லா பக்கங்களிலிருந்து நோக்கினேன்								
3.	சூழ்நிலையை கட்டுபாட்டிற்குள் வைக்க முயன்றேன்								
4.	பிரச்சனைகளை படிப்படியாக கையாள முயன்றேன்								
5.	பிரச்சனையை என் எண்ணத்திலிருந்து நீக்கி வேறு காரியங்களைக் குறித்து யோசிப்பேன்								
6.	பிரச்சனை நீங்கிவிடும் என்று விரும்புதல்								
7.	பிரச்சனையில் முன்னேற்றம் உண்டாகும் என நம்பினேன்								
8.	கலைப்படாதே எல்லாம் நல்லதாகவே நடக்கும் என்று எனக்கு நானே சொல்லிக் கொண்டேன்								
9.	நகைச்சுவை உணர்வுடன் இருக்க முயன்றேன்								
10.	என் வாழ்க்கையில் நடந்த நல்லனவற்றைப் பற்றி யோசித்தேன்								
11.	நல்லதாகவே நினைக்க முயற்சித்தேன்								
	சூழ்நிலையில் நல்ல பக்கங்களை								

12.	முயன்றேன்.								
13.	பிரச்சனைகளைக் குறித்து கவலைப்பட்டேன்.								
14.	ஆதிக கோபமடைந்து உணர்வுகளை வெளிப்படுத்தினேன்.								
15	நான் விரும்பிய மற்ற சந்தோஷமான காரியங்களில் ஈடுபாடு என் கவனத்தை வேறு திசையில் திருப்ப முயற்சித்தேன்								
16.	சுறுசுறுப்பாய் வேலை செய்ய முயற்சி செய்தேன்								
17.	குடும்பத்தினர் அல்லது நண்பர்களுடன் பிரச்சனையை குறித்து பேசினேன்								
18.	இதே சூழ்நிலையை கடந்து சென்ற மற்றொருவருடன் இப்பிரச்சனையை குறித்து பேசினேன்								
19.	உணர்வுகளை எனக்குள்ளேயே வைத்தேன்								
20.	தனிமையிலிருந்து பிரச்சனைகளுக்கு தீர்வுகான யோசித்தேன்								
21.	என் உணர்வுகளை கட்டுப்பாட்டிற்கு வைக்க முயன்றேன்								
22.	பிரச்சனைகளுக்கு நானே முடிவுகான விரும்பினேன்								

GENERAL HEALTH QUESTIONNAIRE-12

Please answer ALL the questions on the following pages simply by encircling the answer you think most nearly to you. Remember that we want to know about present and recent complaints, not those you had in the past. It is important that you answer ALL the questions.

HAVE YOU RECENTLY:-	A	B	C	D
1. been able to concentrate on whatever you are doing?	Better than usual	Same as usual	Less than usual	Much less than usual
2. lost much sleep over worry?	Not at all	No more than usual	Rather more than usual	Much more than usual
3. felt that you are playing a useful part in things?	More so than usual	Same as usual	Less useful than usual	Much less than usual
4. felt capable of making decisions about things?	More so than usual	Same as usual	Less so than usual	Much less capable
5. felt constantly under strain?	Not at all	No more than usual	Rather more than usual	Much more than usual
6. felt you couldn't over come your difficulties?	Not at all	No more than usual	Rather more than usual	Much more than usual
7. been able to enjoy your normal day-to-day activities?	More so than usual	Same as usual	Less so than usual	Much less than usual
8. been able to face up to your problems?	More so than usual	Same as usual	Less able than usual	Much less able
9. been feeling unhappy and depressed?	Not at all	No more than usual	Rather more than usual	Much more than usual
10. been losing confidence in yourself?	Not at all	No more than usual	Rather more than usual	Much more than usual
11. been thinking of yourself as a worthless person?	Not at all	No more than usual	Rather more than usual	Much more than usual

12.	been feeling reasonably happy, all things considered?	More so than usual	About same as usual	Less so than usual	Much less than usual

GENERAL HEALTH QUESTIONNAIRE- 12

1. rkgfhykhf jhqfs; nraAk; Nt iyfspy; jqfshy; mjpfk; ftdk; nrYjj Kbfpwjh?
(a) tof;fj;ijtpl edwhf
(b) tof;fk; NghyNt
(c) tof;fj;ijtpl Fiwthf
(d) tof;fj;ijtpl kpfTk; Fiwthf

2. rkgfhykhf ftiyahy; J}f;fj;ij ,oeJtpl;lh;fsh?
(a) ,y;iy
(b) tof;fj;ijtpl mjpfkhf ,y;iy
(c) tof;fj;ijtpl kpf mjpfkhf
(d) tof;fj;ijtpl kpf kpf mjpfkhf

3. rkgfhykhf jhqfs; thof;ifapy; cgNahfkhd Ntiyfspy; <Lgl;L tUthjhf
czh;fpwh;fsh?
(a) tof;fj;ijtpl edwhf
(b) tof;fk; NghyNt
(c) tof;fj;ijtpl Fiwthf
(d) tof;fj;ijtpl kpfTk; Fiwthf

4. rkf fhykhf thof;ifapy; /nrayfspy; KbT vLf;Fk; jpwik ,Uf;fpwjh?
(a) tof;fj;ij tpl edwhf
(b) tof;fk; NghyNt
(c) tof;fj;ijtpl Fiwthf
(d) tof;fj;ijtpl kpfTk; Fiwthf

5. rkgfhkhf vgNghJk; kd mOjjjpy; csshf czh;fpwh;fsh?
(a) ,y;iy
(b) tof;fj;ijtpl mjpfkhf ,y;iy
(c) tof;fj;ijtpl kpf mjpkhf
(d) tof;fj;ijtpl kpf kpf mjpfkhf

6. rkgfhykhf jhqfs; gpurrpidfspy; ,UeJ ks Kbahky; ,Uggjhf
(a) ,y;iy
(b) tof;fj;ijtpl mjpfkhf ,y;iy
(c) tof;fj;ijtpl kpf mjpfkhf
(d) tof;fj;ijtpl kpf kpf mjpfkhf

7. rkgfhykhf jqfspd; mdwhl eltbf;ifis mDgtpj;J czu Kbfpwjh?
(a) tof;fj;ijtpl mjpfkhf
(b) tof;fk; NghyNt

(c) tof fj ijtpl Fiwthf
(d) tof fj ijtpl kpfTk Fiwthf

8. rkgfhykhf jqfshy; gpurridfis vjphnfhs;s Kbfpwjh?
(a) tof fj ijtpl mjpfkhf
(b) tof fk NghyNt
(c) tof fj ijtpl Fiwthf
(d) tof fj ijtpl kpf kpf Fiwthf

9. rkg fhykhf jhqfs; ekgpf if ,oeJ tUfpwhfsh?
(a) ,y iy
(b) tof fj ijtpl mjpfkhf ,y iy
(c) tof fj ijtpl kpf mjpfkhf
(d) tof fj ijtpl kpf kpf mjpfkhf

10. rkg fhykhf jhqfs; ekgpf if ,oeJ tUfpwhfsh?
(a) ,y iy
(b) tof fj ijtpl mjpfkhf ,y iy
(c) tof fj ijtpl mjpfkhf
(d) tof fj ijtpl kpf kpf mjpfkhf

11. rkgfhykhf jhqfs; xU yhaf fww/kjpggww eguhf jqfis
vz;Z fpwhfsh?
(a) ,y iy
(b) tof fj ijtpl mjpfkhf ,y iy
(c) tof fj ijtpl mjpfkhf
(e) tof fj ijtpl kpf kpf mjpfkhf

12. rkgfhykhf nghJthf vy;yhtwwpYk; NghJkhf msT kfpo;r;rpAld;
,Uggjhf
cz hfpwhfsh?
(a) tof fj ijtpl mjpfk
(b) tof fk NghyNt
(c) tof fj ijtpl Fiwthf
(d) tof fj ijtpl kpfTk Fiwthf

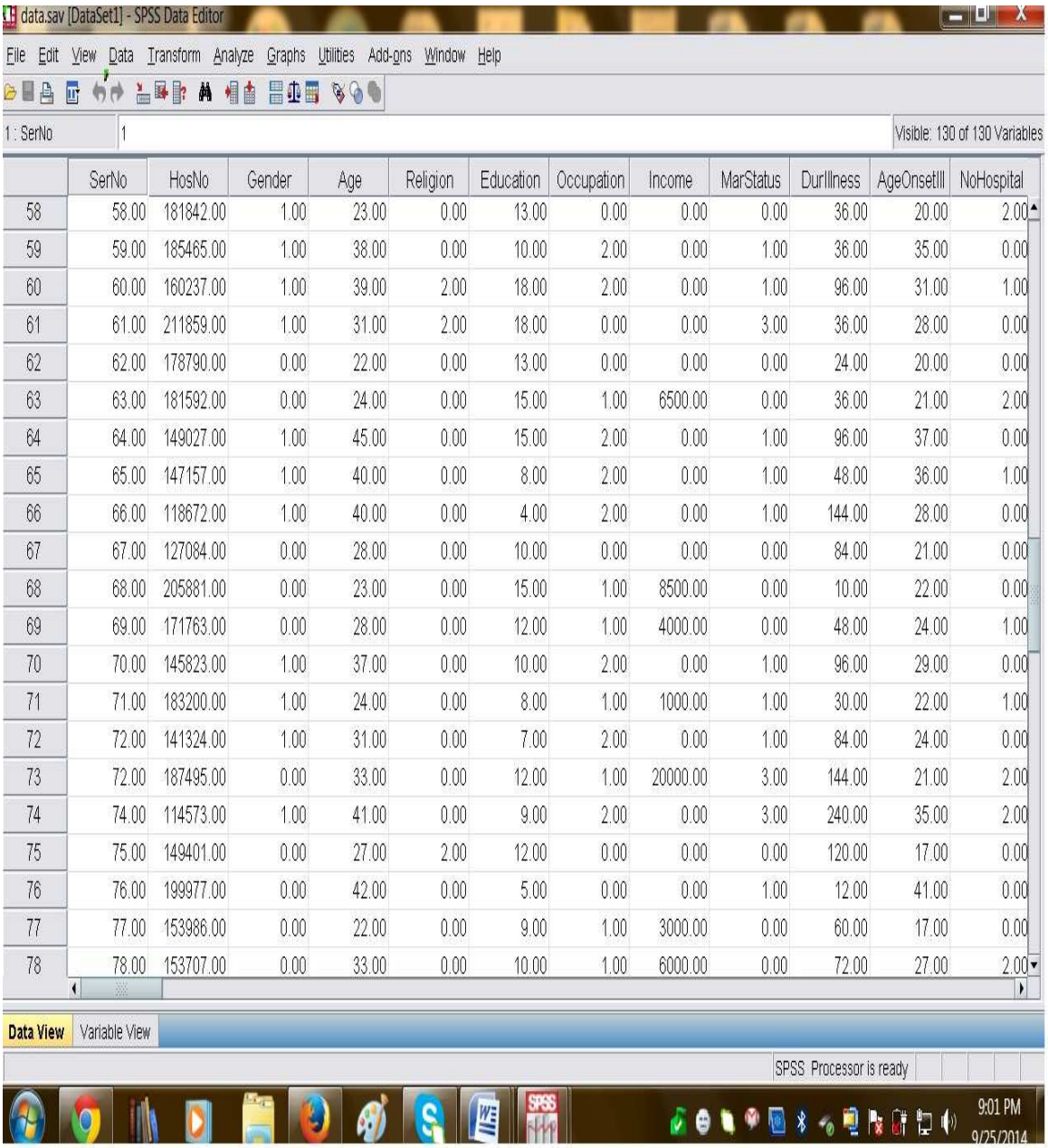
SOCIODEMOGRAPHIC and CLINICAL DATA SHEET

PATIENT

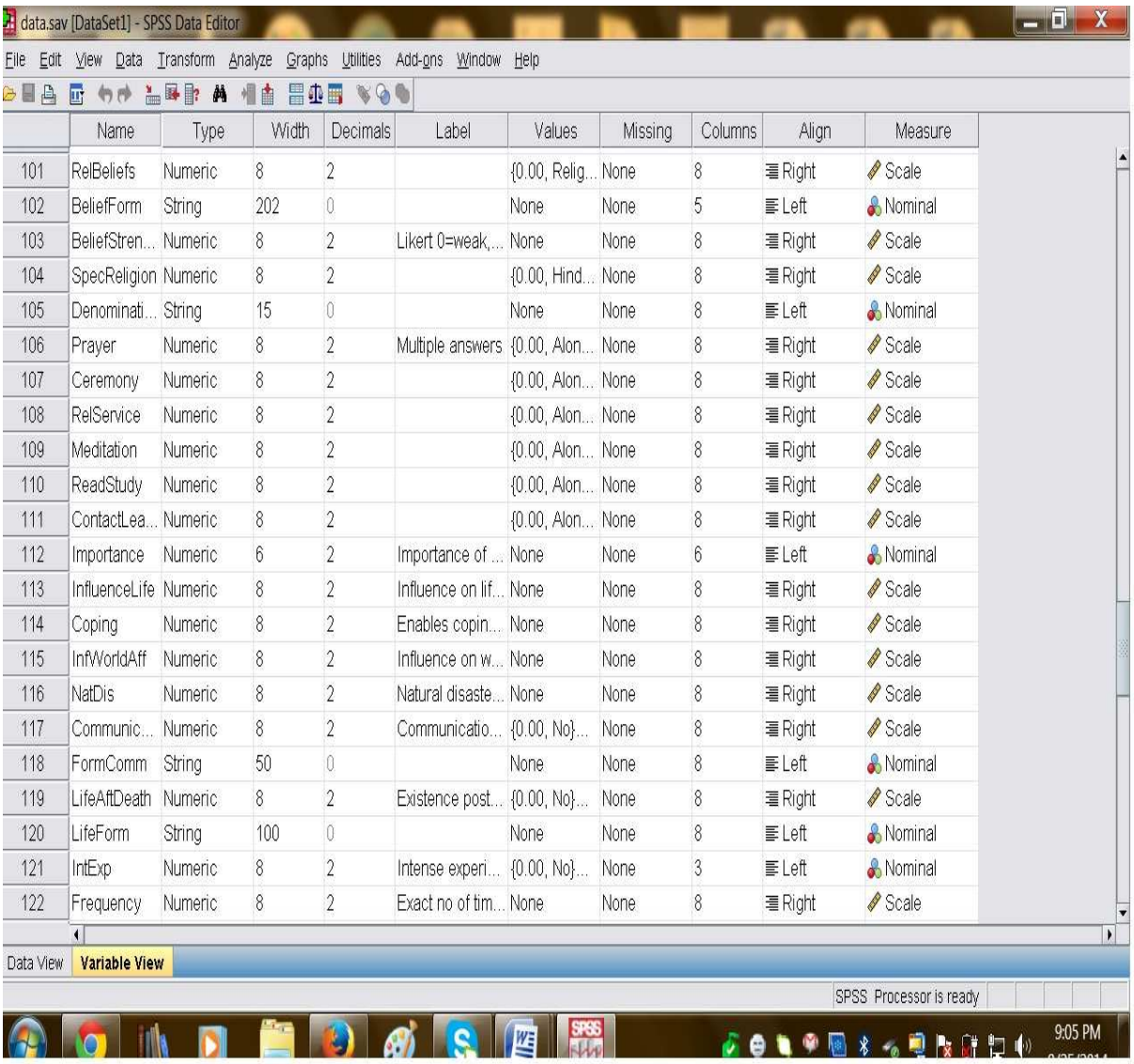
1. Serial No.
2. Hospital No.
3. Gender(i) Male (ii) Female
4. Age (in years)
5. Religion
6. Years of education
7. Occupation (i) Unemployed (ii) Employed (iii) Housewife
8. Income (Rs per month)
9. Marital Status (i) Single (ii) Married (iii) Widow/Widower (iv) Separated/Divorced
10. Duration of illness
11. Age of onset of illness
12. Number of hospitalizations
13. ECT required (i) No (ii) Yes
14. Current medication
15. Antipsychotic induced side effects (i) No (ii) Yes
16. History of attempted self harm(i) No (ii) Yes
17. Compliance with medication (i) Poor (ii) Occasionally misses medication (iii) Good
18. Substance use (i) Absent (ii) Present
19. Medical co-morbidities (i) No (ii) Yes
20. Current PANSS Score

RELATIVE

1. Relationship to patient (i) Father (ii) Mother (iii) Spouse (iv) Child (v) Sibling (vi) Son/Daughter in law (vii) Mother/Father in law (viii) Cousin (ix) Other (Specify)
2. Gender(i) Male (ii) Female
3. Age (in years)
4. Religion
5. Highest class studied
6. Literacy (i) Illiterate (ii) Read only (iii) Read and write
7. Occupation
8. Marital Status (i) Single (ii) Married (iii) Widow/Widower (iv) Separated/Divorced
9. Family Income per month
10. No of people staying in the same house
11. Debts (i) Absent (ii) Present
12. Total amount of debt (if present)
13. No of square meals per day
14. House (i) Own (ii) Rented (iii) Squatting
15. Type of house (i) Concrete (ii) Mud wall (iii) Thatched hut (iv) Other (Specify)
16. Living with patient during last year (i) No (ii) Yes
17. Violence by the patient toward the relative (i) No (ii) Yes
18. Health status: DM/HT/Others/Nil
19. Substance use: Nicotine/alcohol/other
20. Perceived social support:(i)Absent (ii)Present



	SerNo	HosNo	Gender	Age	Religion	Education	Occupation	Income	MarStatus	DurIllness	AgeOnsetIll	NoHospital
58	58.00	181842.00	1.00	23.00	0.00	13.00	0.00	0.00	0.00	36.00	20.00	2.00
59	59.00	185465.00	1.00	38.00	0.00	10.00	2.00	0.00	1.00	36.00	35.00	0.00
60	60.00	160237.00	1.00	39.00	2.00	18.00	2.00	0.00	1.00	96.00	31.00	1.00
61	61.00	211859.00	1.00	31.00	2.00	18.00	0.00	0.00	3.00	36.00	28.00	0.00
62	62.00	178790.00	0.00	22.00	0.00	13.00	0.00	0.00	0.00	24.00	20.00	0.00
63	63.00	181592.00	0.00	24.00	0.00	15.00	1.00	6500.00	0.00	36.00	21.00	2.00
64	64.00	149027.00	1.00	45.00	0.00	15.00	2.00	0.00	1.00	96.00	37.00	0.00
65	65.00	147157.00	1.00	40.00	0.00	8.00	2.00	0.00	1.00	48.00	36.00	1.00
66	66.00	118672.00	1.00	40.00	0.00	4.00	2.00	0.00	1.00	144.00	28.00	0.00
67	67.00	127084.00	0.00	28.00	0.00	10.00	0.00	0.00	0.00	84.00	21.00	0.00
68	68.00	205881.00	0.00	23.00	0.00	15.00	1.00	8500.00	0.00	10.00	22.00	0.00
69	69.00	171763.00	0.00	28.00	0.00	12.00	1.00	4000.00	0.00	48.00	24.00	1.00
70	70.00	145823.00	1.00	37.00	0.00	10.00	2.00	0.00	1.00	96.00	29.00	0.00
71	71.00	183200.00	1.00	24.00	0.00	8.00	1.00	1000.00	1.00	30.00	22.00	1.00
72	72.00	141324.00	1.00	31.00	0.00	7.00	2.00	0.00	1.00	84.00	24.00	0.00
73	72.00	187495.00	0.00	33.00	0.00	12.00	1.00	20000.00	3.00	144.00	21.00	2.00
74	74.00	114573.00	1.00	41.00	0.00	9.00	2.00	0.00	3.00	240.00	35.00	2.00
75	75.00	149401.00	0.00	27.00	2.00	12.00	0.00	0.00	0.00	120.00	17.00	0.00
76	76.00	199977.00	0.00	42.00	0.00	5.00	0.00	0.00	1.00	12.00	41.00	0.00
77	77.00	153986.00	0.00	22.00	0.00	9.00	1.00	3000.00	0.00	60.00	17.00	0.00
78	78.00	153707.00	0.00	33.00	0.00	10.00	1.00	6000.00	0.00	72.00	27.00	2.00



	Name	Type	Width	Decimals	Label	Values	Missing	Columns	Align	Measure
101	RelBeliefs	Numeric	8	2		{0.00, Relig...	None	8	Right	Scale
102	BeliefForm	String	202	0		None	None	5	Left	Nominal
103	BeliefStren...	Numeric	8	2	Likert 0=weak,...	None	None	8	Right	Scale
104	SpecReligion	Numeric	8	2		{0.00, Hind...	None	8	Right	Scale
105	Denominati...	String	15	0		None	None	8	Left	Nominal
106	Prayer	Numeric	8	2	Multiple answers	{0.00, Alon...	None	8	Right	Scale
107	Ceremony	Numeric	8	2		{0.00, Alon...	None	8	Right	Scale
108	RelService	Numeric	8	2		{0.00, Alon...	None	8	Right	Scale
109	Meditation	Numeric	8	2		{0.00, Alon...	None	8	Right	Scale
110	ReadStudy	Numeric	8	2		{0.00, Alon...	None	8	Right	Scale
111	ContactLea...	Numeric	8	2		{0.00, Alon...	None	8	Right	Scale
112	Importance	Numeric	6	2	Importance of ...	None	None	6	Left	Nominal
113	InfluenceLife	Numeric	8	2	Influence on lif...	None	None	8	Right	Scale
114	Coping	Numeric	8	2	Enables copin...	None	None	8	Right	Scale
115	InfWorldAff	Numeric	8	2	Influence on w...	None	None	8	Right	Scale
116	NatDis	Numeric	8	2	Natural disaste...	None	None	8	Right	Scale
117	Communic...	Numeric	8	2	Communicatio...	{0.00, No}...	None	8	Right	Scale
118	FormComm	String	50	0		None	None	8	Left	Nominal
119	LifeAftDeath	Numeric	8	2	Existence post...	{0.00, No}...	None	8	Right	Scale
120	LifeForm	String	100	0		None	None	8	Left	Nominal
121	IntExp	Numeric	8	2	Intense experi...	{0.00, No}...	None	3	Left	Nominal
122	Frequency	Numeric	8	2	Exact no of tim...	None	None	8	Right	Scale